Accounting Review

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CONTRIBUTORS TO THE APRIL NUMBER

GEORGE R. HUSBAND (*Another Look at Cost or Market Whichever is Lower*) is a member of the accounting faculty of Wayne University in Detroit.

CURTIS T. ATKISSON (*Significant Contributions of Modern Internal Auditing to Management*) is on the staff of the financial vice president of Ebasco Services, Inc., in New York.

JOHN N. MYER (*The Backward Art of Teaching Accounting*) is a member of the faculty in accounting at the College of the City of New York.

JOHN W. MCMAHAN (*Basic Education for Accounting in Business*) is a member of the accounting faculty of Allegheny College at Meadville, Pennsylvania.

R. P. MARPLE (*Combining the Forecast and Flexible Budgets*) is assistant secretary for technical service in the National Association of Cost Accountants in New York.

HOWARD F. GREENE (*Cost Problems Encountered in CPA Examinations*) is in practice for himself in Boston.

W. T. BAXTER (*Credit, Bills, and Bookkeeping in a Simple Economy*) is a member of the accounting faculty of the University of Cape Town in South Africa.

LOUIS E. ZRAICK (*Air Transport Accounting*) formerly with American Airlines, Inc., is on the accounting staff of OPA, Region 11, in New York City.

W. K. PIERPONT (*The Classification and Control of Navy Expenditures*) is a lieutenant (j.g.) attached to the staff of the Fiscal Director of the Navy Bureau of Ordnance in Washington.

JOE BOND (*Economic Abracadabra*), formerly a member of the Arkansas Commission of Public Utilities, is principal in his own public accounting firm in Little Rock.

F. SEWELL BRAY (*Recent British Accounting Developments*) is a partner in the firm of Tansley Witt & Co., Chartered Accountants, in London.

GEORGE B. MCCOWEN (*The Accountant as an Artist*) is a member of the accounting faculty at Oklahoma Agricultural and Mechanical College at Stillwater.

The Accounting Review

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ANOTHER LOOK AT COST OR MARKET WHICHEVER IS LOWER

GEORGE R. HUSBAND

THE EVALUATION of inventories is of considerable importance for purposes of both the balance sheet and the income statement. In the former, the inventory evaluation influences the current-asset total, the grand total of all the assets, and the surplus figure; in the latter, the inventory evaluation materially influences the figures for cost of goods sold and for net profit. The general rule for purposes of balance-sheet evaluation is that assets should be exhibited at cost, whereas for purposes of the income statement the general rule has held that evaluations should be on such a basis that profits (and operating business losses) will be taken up only on the basis of sales. These rules are interrelated, as well as consistent with the concept of historical accounting. Departure from them represents a violation of realized, experiential accounting and must be justified on other grounds. Notwithstanding these general rules it has long been considered good practice to evaluate the inventories on the basis of cost or market whichever is lower, thus frequently exhibiting the asset at less than cost. Correspondingly, so-called losses which have not been crystallized by the act of sale are taken up in the income statement. The principal reason advanced in support of this practice has been that it is conservative.

While it is true that this procedure always results in showing the lower figure of cost or the market value in the balance sheet and that in this respect it is conservative, its effects upon the income figures of successive income statements are not uniform. The latter may be summarized into four situations: (1) a situation in which the amount by which the market value is lower than cost is the same for both the initial and the final inventories of a given period; (2) a situation in which the difference between the cost figure and the market value of the final inventory is greater than the difference between the cost figure and the market value of the initial inventory; (3) a situation in which the difference between the cost figure and the market value of the final inventory is less than the difference between the cost figure and the market value of the initial inventory; (4) a situation in which the final inventory is on the basis of cost and the initial inventory is expressed in terms of a market value lower than cost. The effects of these four relationships and certain general conclusions to be drawn from them may best be set forth by means of illustrations.

As a base against which the influence of the cost-or-market-whichever-is-lower rule may be measured, it is assumed that the initial inventory for Year I evaluated at cost is $40,000; that the final inventory at cost is $60,000; and that the final inventory for Year II at cost is $80,000. Partial income statements prepared with the aid of these figures appear as follows:

Year I

Sales		$450,000
Cost of Goods Sold:		
Initial Inventory (at cost)	$ 40,000	
Purchases	390,000	
	$430,000	
Final Inventory (at cost)	60,000	370,000
Gross Profit		$ 80,000

Year II

Sales		$510,000
Cost of Goods Sold:		
Initial Inventory (at cost)	$ 60,000	
Purchases	440,000	
	$500,000	
Final Inventory (at cost)	80,000	420,000
Gross Profit		$ 90,000

CASE A

If it is assumed that the cost-or-market-whichever-is-lower inventory figure for Year I is $49,000 and that the cost-or-market-which-ever-is-lower figure for Year II is $69,000, the following results are obtained by using these amounts:

Year I

Sales		$450,000
Cost of Goods Sold:		
Initial Inventory (at cost)	$ 40,000	
Purchases	390,000	
	$430,000	
Final Inventory (at c. or m.)	49,000	381,000
Gross Profit		$ 69,000

Year II

Sales		$510,000
Cost of Goods Sold:		
Initial Inventory (at c. or m.)	$ 49,000	
Purchases	440,000	
	$489,000	
Final Inventory (at c. or m.)	69,000	420,000
Gross Profit		$ 90,000

Since the cost-or-market-whichever-is-lower figure for the final inventory of Year I is less than the cost figure used in the base illustration by $11,000, the cost-of-goods-sold figure is increased correspondingly and the gross profit decreased by an equivalent amount. The method may therefore be said to incorporate the market decline in the income statement and to be conservative to the extent of the decline. It is objectionable, however, to exhibit the market decline as an increase of the cost of goods sold, since it serves to conceal the facts and to confuse the ratio relationships. Preferably, the differential should be shown as a nonoperating financial deduction, if it is to be shown at all.

For Year II the cost-or-market-which-ever-is-lower figures for both the initial and the final inventories are less than the cost figures by an equal amount, $11,000. Since the reduction in the initial inventory decreases the cost-of-goods-sold figure by the same amount that the reduction in the final inventory increases it, the result is a gross profit of exactly the same amount as that secured when the cost figures are used. Comparatively, the profit figure is not stated conservatively, since it is the same amount as that which would be obtained if the figures for the two inventories were on a cost basis, the basis from which conservatism must be measured. The fact of importance is that the cost-or-market-whichever-is-lower influence upon the initial and the final inventories is exactly counteractive. From the standpoint of mere money accounting it makes no difference whether the factor which contributes to the lower market figures is solely the result of a change in prices or of a change in quantities, or whether both a change in prices and a change in quantities contribute to the resulting differences.

It is evident that the Year II balance sheet still remains in a *conservative* position since the cost-or-market figure exhibited is $11,000 less than would be the case if the cost figure had been used. The offsetting conservatism on the right-hand side is in the surplus figure, which is $11,000 less than if cost figures were used, because of the reduced profit credit of the preceding year.

CASE B

If it is assumed that the cost-or-market-whichever-is-lower inventory figure for Year I is $49,000, and that the cost-or-market-whichever-is-lower figure for Year II is $65,000, the following results are obtained:

Year I

Sales		$450,000
Cost of Goods Sold:		
Initial Inventory (at cost)	$ 40,000	
Purchases	390,000	
	$430,000	
Final Inventory (at c. or m.)	49,000	381,000
Gross Profit		$ 69,000

Year II

Sales		$510,000
Cost of Goods Sold:		
Initial Inventory (at c. or m.)	$ 49,000	
Purchases	440,000	
	$489,000	
Final Inventory (at c. or m.)	65,000	424,000
Gross Profit		$ 86,000

In this case the final inventory figure for Year I is $11,000 less, and the final inventory figure for Year II is $15,000 lower, than if the cost figure had been used. The result is an $11,000 reduction in the profit figure for Year I below what would have been obtained if the cost figure had been used, and a profit for Year II $4,000 lower than if the cost figure had been used. The effect of using the cost-or-market value of the initial inventory for Year II is to reduce the cost-of-goods-sold figure by $11,000; the result of using the cost-or-market final inventory figure is an increase of $15,000 in the cost-of-goods-sold figure (in both cases the differences are measured from cost). The final effect is a net decrease of $4,000 in profit. It may be concluded, then, that as respects the income statement of any given year the relative conservatism afforded by the use of the cost-or-market-whichever-is-lower method will depend upon the amount by which the reduction in the final inventory figure exceeds the reduction in the initial inventory figure. The resulting conservatism added to the algebraic effects of prior years will afford the proper reduction in surplus to support the total-asset reduction for the current year.

CASE C

Assume again that the cost-or-market-whichever-is-lower figure for the final inventory of Year I is $49,000 but that the cost-or-market-whichever-is-lower figure for the final inventory of Year II is $74,000 The following depicts the situation:

Year I

Sales		$450,000
Cost of Goods Sold:		
Initial Inventory (at cost)	$ 40,000	
Purchases	390,000	
	$430,000	
Final Inventory (at c. or m.)	49,000	381,000
Gross Profit		$ 69,000

Year II

Sales		$510,000
Cost of Goods Sold:		
Initial Inventory (at c. or m.)	$ 49,000	
Purchases	440,000	
	$489,000	
Final Inventory (at c. or m.)	74,000	415,000
Gross Profit		$ 95,000

In this case the cost-or-market-whichever-is-lower figure for the final inventory of Year I is again lower than the cost figure by $11,000. The cost-or-market-whichever-is-lower figure for the final inventory of Year II is less than the cost figure by $6,000. The result is an increase in the profit figure of $5,000 over and above the profit figure that would have been secured had the inventory figures been at cost. This is the amount by which the reduction of the initial inventory figure, $11,000, exceeds the reduction of the final inventory figure, $6,000. The reduction in the initial inventory figure reduces the cost-of-goods-sold figure by $11,000; the reduction of the final inventory figure increases the cost-of-

goods-sold figure by $6,000. The net result is an increase of $5,000 in the profit figure. It may be concluded, then, that the use of the cost-or-market-whichever-is-lower method will increase the profit figure of any given year over and above the figure which would have been obtained had cost figures been used for the inventories by an amount equal to that by which the reduction of the initial inventory figure exceeds the reduction of the final inventory figure.

CASE D

Assume that the cost-or-market-whichever-is-lower figure for the final inventory of Year I is $49,000, and that the cost-or-market-whichever-is-lower figure for Year II is the cost figure, or $80,000. The following illustrations exhibit the effects:

Year I

Sales		$450,000
Cost of Goods Sold:		
Initial Inventory (at cost)	$ 40,000	
Purchases	390,000	
	$430,000	
Final Inventory (at c. or m.)	49,000	381,000
Gross Profit		$ 69,000

Year II

Sales		$510,000
Cost of Goods Sold:		
Initial Inventory (at c. or m.)	$ 49,000	
Purchases	440,000	
	$489,000	
Final Inventory (at c. or m.)	80,000	$409,000
Gross Profit		$101,000

The profit figure for Year II is $11,000 greater than if the inventory cost figures had been used throughout, thus offsetting entirely the decrease in the profit of Year I which resulted from the use of the cost-or-market-whichever-is-lower method of evaluation. It is evident that under the cost-or-market-whichever-is-lower method full recovery of the profit deficiencies of previous years will be secured whenever it is necessary to use the cost figure for the final inventory instead of a lower market figure.

SUMMARY

In summary, the following conclusions respecting the use of the cost-or-market-whichever-is-lower method of inventory evaluation, previously stated, are evident:

1. Whenever the initial inventory is at cost and the final inventory at a market evaluation lower than cost, the profit for the year will be reduced by the amount of the difference between the cost and the market value of the final inventory.
2. If the differences between the cost figure and the market-value figure for the initial and the final inventories are the same, the profit figure for that year will be the same as if both inventories had been stated at cost.
3. If the difference between the cost figure and the market-value figure of the final inventory is greater than the difference between the cost figure and the market-value figure of the initial inventory, the profit figure for the year will be reduced by the amount by which the former difference exceeds the latter difference.
4. If the difference between the cost figure and the market-value figure of the final inventory is less than the difference between the cost and the market value of the initial inventory, the profit for the year will be greater by the amount by which the former is less than the latter.
5. If after market values lower than cost have been used for any period of time a final inventory, consistent with the formula, is stated at cost, all of the previous remaining profit decreases resulting from the use of lower market values in the past will be expressed as an increase in the profit of the year in which the final inventory is so stated.

While it is true that the cost-or-market-whichever-is-lower method expresses as a balance-sheet decrease for any given year the amount by which the market value of the final inventory is less than cost, the over-all effect upon the profit of any given year will, as indicated above, depend upon the relative effect which the use of the method has upon the initial as well upon the final inventory. Because of the counteractive influence of the two inventory figures, the profit for any given year may be less conservatively stated than if cost were used.

Cost or Market Whichever is Lower Contrasted With Other Methods

Although no single statement will adequately cover all situations, it is evident that the results obtained by using the cost-or-market-whichever-is-lower method tend to run in a direction opposite from those to be secured from using the modernly popular first-in, last-out method of evaluating inventory. In a rising market the inventories under the cost-or-market-whichever-is-lower rule will generally be evaluated at cost, thus allowing the speculative profit resulting from increasing prices to be taken up in the year of sale. The first-in, last-out method tends to evaluate the inventories at the older and presumably lower costs, thus decreasing the inventory figures, increasing the cost-of-goods-sold figure, and decreasing profit. When the price level is declining, the inventories under the cost-or-market method tend to be expressed at market prices, thus, with allowance for the relative influence of the initial and final inventories, contributing to a presentation of decreased profits. The first-in, last-out method, on the other hand tends to result in the expression of greater profits during a declining market than if cost figures were used. The effects of using the cost-or-market-whichever-is-lower method thus tend to be the same as those secured from the use of cost figures when the price level is rising. When the market is falling, the method contributes to the showing of a decrease in profits, with allowance, again, for the relative influence of the initial and the final inventories. The tendency, probably, is to magnify the evil effects of a decline in profits during a fall in the cycle but to contribute little or nothing when the cycle is ascending.

It is sometimes held that the lower value secured by using cost or market whichever is lower is really the proper cost or portion of cost to be carried forward to the succeeding period, since it thus enables the succeeding period to exhibit a normal profit. Why a procedure dedicated to exhibiting the effects of actual, crystallized experiences should write off a portion of cost on the basis of a situation not crystallized by experience is not clear, but it would appear that such a statement of the case is fictitious. When a market value is used, it is market value that is used and not a portion of cost. The fact that the lower market value is mathematically equal to a portion of cost is hardly sufficient to justify the conclusion that it *is* a portion of cost. It does not follow that two items which are equal mathematically are necessarily the same. The recognized practice is to substitute the market figure for cost and not to write off a portion of cost. If a portion of cost is really used, then obviously it is cost and not market, and the method should be designated a cost method and not a cost or market method. To argue otherwise is to play with words in a manner which is hardly justified.

If the argument were sound, which it is not, it would be just as applicable to fixed assets as to inventory. In all cases only the cost applicable to future periods should be carried forward. The existence of a market value less than cost would therefore make it reasonable to argue that the cost upon which future depreciation should be

based is the market value. There are arguments which tend to support the basing of depreciation upon market values, and arguments which tend to support the conclusion that depreciation computed on market value is the proper burden to be charged against a given period, but these frankly and honestly are not based on the arguments supporting historical accounting. Nor do they make the error of holding that the market value is really a portion of cost.

However, if for the sake of argument it should be granted that the market value carried forward is really a portion of cost, why is it proper to carry forward only a portion of the total cost? So that the succeeding period may exhibit a normal profit? Actually, of course, a lower market value existing at the close of the fiscal period need not always mean a loss of profit in the following period. Selling prices are not always adjusted downward to accord with a decline in current buying costs. In the second place, not all the declines in market value are permanent. It is frequently the case that a counter market movement restores the buying price prior to the sale of the inventory. It should further be noted that when the question is stated in this way the loss which is feared is not a loss of cost but a loss of potential profit. Actually a decline in market value need not mean a loss of cost, and in a large number of cases probably does not mean such a loss. In this sense the loss with which the argument is concerned is not the usual accounting loss involving a situation in which cost evaporates; it is rather a loss of future profit opportunity, which in the accounting sense is not an experiential loss at all, which is involved. Fundamentally, the cost-or-market method really means that the profit of a current period rather than the profit of a future period is reduced.

Further, since when has it become proper accounting for profit potential to determine recorded cost? Accounting cost is the result of a purchase experience, and accounting profit is the result of the sale of a product above the experienced cost. If goods become obsolete or are destroyed it is proper to reduce the cost carried forward, because the physical quantity carried forward is reduced; only the cost of that reduced physical quantity can therefore properly express the accounting benefit conferred upon the succeeding period. When the physical quantity carried into a later period is not reduced, however, there can hardly be a corresponding justification for reducing the cost carried forward. The argument that cost or market whichever is lower provides us with the proper portion of cost to be charged against the next period appears to involve the transference of a principle based upon a physical situation to a value situation and thus to be inconsistent with the experiential basis of accounting. The market value carried forward may be the proper burden to charge against the following period, but as such it is the economic cost and not the experiential accounting cost of the physical goods transferred to the later period. The argument that it is cost which is carried forward violates the very definition of accounting cost and has much more the appearance of rationalization than of straightforward analysis.

In conclusion it seems clear that the cost-or-market-whichever-is-lower method of inventory evaluation results in profit manipulation rather than in revelation of historical profit. In view of the current emphasis upon the income statement it would appear to be desirable either to revise the concept of historical accounting or to discard the practice of evaluating the inventory on the cost-or-market-whichever-is-lower basis.

SIGNIFICANT CONTRIBUTIONS OF MODERN INTERNAL AUDITING TO MANAGEMENT

Curtis T. Atkisson

Speaking broadly, modern internal auditing has been developed to provide the protection management needs, in the same sense that external auditing (public accounting) has developed to provide the protection investors need. As one of my colleagues in the Institute of Internal Auditors has well said, "Necessity created internal auditing and is making it an integral part of modern business. No large business can escape it. If they haven't got it now, they will have it sooner or later, and, if events keep developing as . . . at present, they will have it sooner."[1]

Perhaps I am in an exposed position. But through review of Institute membership applications and other Institute affairs, I have been able to view closely the stream of internal auditing activity and to notice what appears to be almost a rash of activity. In the past three or four years certainly dozens of cases have come to my attention in which business organizations in the United States and Canada have undertaken the establishment of internal audit functions or the establishment of such functions on a new and improved basis. And the companies whose managements have authorized these steps include many from the aristocracy of business, as well as many from the war-born or war-developed enterprises.

Internal auditing is not new. Internal auditing staffs were maintained by a considerable number of concerns prior to 1900. Internal auditing functions have been carried on in one way or another down through the ages. No organization is too small, and no organization is too large, for some internal auditing. The proprietor of the corner grocery, whether he knows it or not, is continually performing internal auditing functions, that is, verifying that his employees, his customers, and his neon sign are performing according to instructions or in the expected manner. No organization is so large and so well organized but that there are some operations on which the so-called "automatic" checks and controls are not feasible, or such checks and controls require verification to assure continued effectiveness.

The current widespread interest in internal auditing in the United States may be attributed to a number of factors, including (1) the emphasis given to the primary responsibility of management for the company's financial statements in investigations, conducted during the late thirties, such as the McKesson & Robbins and certain other widely publicized cases; (2) the increased responsibilities of management under the social legislation of the thirties and currently, and the pressure of war contract control and reconversion; and (3) the increased awareness of management, and of internal auditors as well, of the possibilities of managerial control through internal auditing, as brought about by the recent development of literature on the subject and the work the Institute of Internal Auditors has done and is doing to explore the areas of business in which the auditing technique can be effectively applied.

Not until 1941 was there a book on the subject of internal auditing that treated

[1] Arthur E. Hald, *Internal Auditing Philosophy and Practice* (Brock and Wallston, 1944).

the subject in a comprehensive manner. Late in 1941 the Institute of Internal Auditors was organized as a technical and professional organization devoted to the interests of the internal auditor. In four years the Institute has become an active organization, arranging forums throughout the United States and in Canada for discussion, clarification, and identification of the important principles upon which internal auditors can agree and place corresponding reliance, making possible wide and current interchange of ideas for improvements in auditing technique in old fields and for useful extensions into broader fields, and providing a growing, and even now, a substantial volume of literature on a subject long overdue for development, that sets forth the management as well as the technical accounting and auditing aspects of internal auditing.

The titles of some of the Institute's publications sufficiently indicate the scope of the task the internal auditors, as a professional group, have set for themselves. *Internal Auditing, A New Management Technique* was published in 1943; in the same year also *Management Control Through Internal Auditing;* followed by *Internal Auditing Philosophy and Practice* in 1944, and *Internal Auditing Now and After the War* in 1945.

Modern management is finding that modern internal auditing is not just a means of checking up on the petty cash funds and payroll bank accounts to see that the system of internal control of cash and receivables and merchandise is functioning. It is finding that the techniques of auditing, verification by test check, physical inspection, record analysis, and common-sense appraisal in the light of the facts developed afford a means of doing something more than keeping the cashier honest. It is finding that sales managers, branch managers, and construction engineers, being human, all give a better performance and give a more factual report, for example, on the actual working of a new operation or policy when they know that the auditor will call for an accounting, for a look at the record of performance.

The place of internal auditing in management is to my mind rather well indicated by the following passage which I will quote from an article in a recent issue of the *Harvard Business Review:*[2]

> The Elements of Administration
>
> (1) Determining policy for lines of action, within the limits of discretion established by higher authority.
> (2) Establishing and maintaining an organization of people to carry out policy; allocating functions and responsibilities to subordinates.
> (3) Securing action through the organization established, and in line with the policies determined.
> (4) Assuring coordination and follow-through on action.
> (5) Making continuing and periodic checks to serve as a basis for corrective action or policy revision.
> (6) Anticipating any problem arising from changed conditions, internal or external; and revising policy, organization, and follow-through to meet it.

Clearly the functions of the internal auditing department lie within the fifth element of administration, namely, in the making of periodic checks to serve as a basis for corrective action or policy revision. Obviously, internal auditing is not the sole means, but just one of the means or tools by which management makes checks to serve as a basis for corrective action or policy revision. Also it may be observed that though the responsibility of internal auditing lies entirely within this fifth element of administration, its contributions to management include some notable direct assistance in certain other of the elements mentioned, particularly in giving

[2] "Education for Administration," by Dan Throop Smith, April, 1945.

direct help in assuring coordination and follow-through and in anticipating problems arising from changed conditions, and incidental help in the necessary revising of policy, organization, and follow-through.

Possibly the place which internal auditors are assigning to themselves as the special investigators, the "seeing eye" of top management, seems in some situations an unwarranted arrogation of responsibilities. However, in the language of the lawyer, the onus to a considerable extent is on the individual or organization that questions the assignment of such responsibilities, in view of the fact that the managements of so many top-ranking commercial, industrial, and financial concerns have come to the view that they must have as a part of their organizations an internal audit staff with the independent status and the necessary qualifications to carry on functions of the type indicated.

Probably the most significant contribution that modern internal auditing can make and is making to management is that of assistance in coordinating the performance of an organization with its objectives, as these are set out by, or exist in the minds of, the owners or general management. Brief mention of a few specific examples taken from Institute literature and my own experience will serve to show something of the needs which have given rise to these and other ways in which internal auditing has increased its usefulness to management, and will indicate as well that not all the modernizing has been done yet, that the Institute's influence for self-improvement among internal auditors has a good many corners to reach into yet, and that management's understanding of the possibilities of internal auditing is likewise not universal or complete.

For example, an independent investigator's report had the following to say last year to the management of a company that for years had maintained a staff of nearly a dozen auditors:

> Audits made at present appear to be inadequate in that little check is made of disbursements. In addition to covering agents' accounts the audits should cover imprest funds; payrolls, timekeeping and related functions; stores activities, including inventories, pricing and distribution; organization of clerical and accounting work, including efficiency and capability of personnel; check of cash, securities and funds of Treasury Department (now checked by a bookkeeper from the general books section); and checks of other departments.
>
> Sufficient staff should be provided so that auditors will be available for the training of new employees and for relief of key accounting employees and agents during absence because of sickness, vacation, or other emergency.

A large chemical concern reexamined its internal auditing program with a view to modernization and found a somewhat typical situation: (1) a major part of time and effort was still being devoted to work in the field and too much of the field work was of routine nature; (2) many home office activities were not being audited or not sufficiently audited; and (3) a considerable portion of the audit department's long standing routine and procedure needed change—the audit reports, for example, being far too detailed. The weaknesses suggested their own remedies, and it may be noted that this company now has a special-studies division in the audit department that has as one of its main functions the continued surveying af all departments in the home office for the purpose of establishing more complete and effective audit programs.

It has recently come to my attention that a Canadian manufacturer of pipe is being sued for $400,000 damages alleged to have been done to the plant of its customer by reason of a failure said to have occurred because of defective pipe furnished. Without knowing the merits of the case or the manufacturer's procedures, one is reminded of the cases prominent in the wartime news concerning manufacturers

who were exposed to damaging publicity, and no doubt heavy monetary loss, through failure of their inspection routines and the furnishing of defective material to their own and allied governments. In all these cases, no doubt, all due precautions have been taken to prevent a recurrence. In other concerns the proper inspection routines and records, and policing to assure strict adherence, have been in operation or have been installed to protect the company against such failures of internal control, with the internal auditor taking his due part.

Almost any internal auditor can cite examples of less striking but equally useful preventive or constructive work done by an alert staff. For example, a company's bus and truck garage was an important operating unit; it was being operated by a new superintendent who had undertaken to set up his own accounting system because he had found the reports customarily furnished by the general accounting office on his operations were "too little and too late." The auditor got the story on this grumble and was instrumental in avoiding the setting up of a duplicate set of records by arranging for the superintendent to have what he needed and would use in controlling his operations

Auditing work perhaps tends to follow too much of a fixed pattern, but that there are departures from the "cut and dried" methods may be illustrated by two interesting examples. A well-known American tobacco manufacturing concern maintains no internal audit staff as such, but rather a sort of nucleus of a staff. For all its larger internal audits the staff engaged on that work will consist of employees having other regular duties. A typical group on a large branch office audit, for example, would consist of two or three people from the general office accounting departments, the chief clerk of the general accounting office, and the assistant paymaster, assisted by two or three people from branch offices other than that being audited, including at least one such branch office chief clerk.

Many concerns use such means as this to fill out a partly incomplete staff occasionally, or to handle recurring peak work, as on inventory audits or the like; but the firm in question carries the idea much further and feels that it obtains distinct advantages over the usual method of having a regular staff. Among the advantages claimed are the training received in auditing the accounts of others in a position similar to their own, the insight into field problems obtained by general office employees, and the insight into general office problems gained by field men in their temporary tours of duty as auditors. Among the special conditions here present are a peak of work during the tobacco-buying season, and a perhaps unusually well-developed set of standard practice instructions.

Another departure from usual auditing practice which, like the case just cited, has had the endorsement of top management of the company involved, is that of a large oil company that makes the submitting of a division audit report the occasion for an all-day division management meeting, with the general auditor, the manager of marketing operations, and other general office officials in attendance. Attendance generally ranges from 35 to as high as 60 or 100 people. The primary purpose of the meeting is educational, aimed at achieving an understanding of the why's and wherefore's of company policy and instructions. It is said that presenting audit findings with a background of interesting material on company operations outside the particular division under audit and with an explanation of not only *what* is important, but *why*, has created a new spirit. Whereas previously the auditors and the division management girded themselves for battle

on the results of audit findings, now chips on the shoulders have come off and audit findings are not taken as personal criticisms but accepted as check-ups that are desirable and useful to division management.

While internal auditors frequently have to be on their guard that the time of their staffs is not taken up with extraneous matters to the detriment of regular auditing, many concerns make very fine incidental use of their audit staffs and maintain a staff adequate in number and training to handle various special assignments. On the matter of system installations, for example, the internal audit staff often plays an important part whether or not systems and methods work is a responsibility of another department, or whether the system design originates with outside accountants or consultants. Though it is usually agreed that changes in system have to be sold in order to be successful, too often there is not enough of the best type of selling, that is, not enough plain explaining of the new system to the rank and file that have to operate it. Generally, no better salesmen for this type of work are available than the auditors who know the old system and the personnel who operated it, for they can interpret the new system in terms of the old.

Certainly few things are more important to management today than the development of new methods and skills and the ability to introduce such changes into the work situation without provoking resistance. Internal auditors can assist in the changes, can obtain reliable information as to the immediate acceptability and workability of the changes, and, with proper division of responsibilities, can later give a reliable report upon the success of the changed system in meeting its objectives.

Another type of special assignment that has frequently fallen to the lot of the internal audit staffs is that of investigation of proposed acquisition of new properties or businesses. In the coming period of readjustment some concerns will find this an important consideration in determining whether to have their own internal audit staff and in setting the size of the staff. While an outside viewpoint on such proposals is often needed, a company's own audit staff can hardly be replaced as a means of getting facts and observing many conditions of interest from the standpoint of the purchaser. And if a purchase or merger is consummated it is unnecessary to point out to one who has been through the process the invaluable assistance furnished by the audit staff during the period of taking over the concern and establishing its operations under the policies and procedures of the controlling organization.

The internal auditing department as a training ground is a favorite topic of discussion with the internal auditors of a number of the leading North American business concerns. They speak of the advantages their concerns find in placing men in field supervisory and executive posts who have had varied experience from having viewed a cross section of company operations on the audit staff. They speak of establishing five-year plans for the audit staff, that is, considering five years as the normal period for using a man on the traveling staff before placing him in a field or general office position befitting his experience and capabilities. They speak of the need for key men, that will be met from the audit staff when war-deferred retirements become effective. They speak of the opportunities they believe they can offer returned service men to fill vacancies on the audit staff and quickly train them for other responsibilities. In considering the contributions of internal auditing to management its possibilities as a training ground for management will not be overlooked.

In doing its regular day-to-day job it must not be overlooked that internal auditing is making a significant contribution to management. The internal auditor is the keystone in a whole structure of auditing, as a public accountant pointed out in addressing the Institute last year.[3] He vividly pictured the number of auditors that would be required to inquire into the affairs of a company if no one group of auditors or inspectors had confidence in any other, that is, if insurance auditors, tax auditors, public accountants, city tax auditors, war contract auditors, price regulation auditors, and all the rest, would all satisfy, by detailed checking, their respective obligations to verify the company's records without reliance upon other groups of auditors. The results of such a condition he likened to the position the world would be in if the famous hypothetical oyster were allowed to reproduce unchecked. Instead of having the earth completely composed of oyster shells after a few years' time, we would find that business would consist of nothing but a substratum of working papers covered by layers upon layers of auditors.

In other words, part of the work of the internal auditor is to see that his company does not get too much auditing, that his own work is done in such a way that the public accountant and the other sets of auditors know and rely on what he has done and reduce the necessities of their own work accordingly.

And while we are talking of what the internal auditor is doing for management in the course of his regular day-to-day work we cannot forget, if we would, the cases from the surety company and criminal court files in which management has not been sufficiently protected from itself and has taken the immediate course of the line of least resistance. Nor must we forget that on occasion internal auditors have unhesitantly sacrificed their positions rather than revise their figures to meet the needs of criminally-minded or weak-willed executive officers before their boards of directors.

So much for internal auditing's present position. Where does management find itself today? In the middle, of course, and in the line of fire from conflicting demands: the investor demanding better returns; workers, supervisors, and executives demanding jobs, and better pay; government demanding more taxes and compliance with more regulation; and customers demanding better values. And this means in the individual business, in many cases, the need for a look at all phases of the business and its several means of management control to be sure that the business is put in shape to do the most effective work at the lowest cost.

I suppose that just about all the specialized management groups feel they have prior rights to the ear of top management. Certainly the sales manager can make out a strong case for his department and the desirability of postwar development being keyed to what can be sold; the production manager in the period just passed of necessity has had first consideration; the chief engineer commands respectful attention when he reports on new designs for postwar production; and no doubt the industrial relations manager these days has a well-worn path direct to the board room.

We even have jurisdictional problems within the ranks of organized management groups. Should the advertising manager report to the sales manager or to the president; should the division comptroller report to the division manager or to the company comptroller; should the sales manager and the merchandise buyer or manager report directly to the president or through a top merchandising executive?

No general answers can be given, of

[3] Maurice E. Peloubet in *Internal Auditing Now and After the War.*

course, to these questions. However, the point I wish to emphasize is that internal auditing, or management auditing, if you please, properly conceived, has a unique position of independence within the management circle, and, accordingly, may be very helpful to management in getting answers to questions like these. Internal auditing has no program of its own to put forward as the solution to the company's problems. It has no cure-alls, no new processes, no new products, no new organizational setups, and no incentive plans to offer. It has no responsibility for operations or for decisions on these operating or policy questions.

The internal auditor is completely cold to all these plans that are being proposed and sold to top management, no enthusiasm for them whatsoever. Perhaps his advice has sometimes been sought, perhaps not. In any event he has had no responsibility for the decisions reached.

The internal auditor reserves his enthusiasm for the day when his audit staff is about to pay a visit to the branch where a new operation or policy has been put into effect. He tells his staff what they may need to know in addition to routine bulletins, and what was expected of the new operation or policy when it was authorized, such as budgeted savings, operating improvements, etc. He gives his staff an adequate background of information and asks them to "look at the record," and report on the apparent actual results. And while the staff is there, it is to make a check on the important salvage department operation that was found to be rather loosely controlled at the time of the last visit. Naturally, during the visit the usual quota of routine but essential accounting control checks and verifications is made by the staff.

The internal auditor, and his staff, scrupulously refrain from unnecessarily duplicating the work of any line or staff supervisor that may have already checked up on the new operation or policy. If a factual, unbiased review of actual results has been made by some one else the auditor satisfies himself that this has been done, and so reports. But he will make his own investigation to the extent that he finds necessary, or recommend further investigation by others if the auditor's qualifications will not serve for ascertainment of facts that he feels top management should have.

To emphasize, as I have, the constructive role that modern internal auditing can play in serving management and to ignore the contributions that others make in a kindred capacity would not be to present the whole picture. The Institute's literature is replete with references to the part public accountants have played in furthering the development of effective internal audit departments and to the interest of that profession's leaders in such development. Also, in our discussions we have recognized the role of industrial or management engineers, both on company staffs and on outside consulting staffs, in determining the "one best method" and the internal auditor's responsibility for verifying that the established one best method continues in use after establishment. The contributions that public accountants or other outside consultants can make in constructive analysis and appraisal of a company's operations, methods, and procedures from an outside, broad-scale viewpoint is well recognized. Our emphasis, however, is upon the contributions the internal auditor can make from his vantage point of intimate knowledge of his particular company's operations.

In the final analysis, of course, management itself will determine to a large extent, certainly in the individual concern, what significant contribution internal auditing makes—by what it wants, by what it asks for, by what it demands, by the re-

sponsibility and authority it delegates, by the attitude it takes in backing up that delegation of responsibility and authority.

Internal auditors in turn recognize that they cannot be given a place of responsibility and independence solely on the basis of a management need or their own desire to be helpful; but rather that this can be done only on the basis of a demonstrated ability to apply a good knowledge of their company's business to the reporting of figure-facts and opinions, and only if such facts and opinions are respected throughout the organization and can be relied upon by management in judging whether its policies and practices are being consistently and faithfully followed throughout the organization.

It has been said[4] that if private enterprise is to survive the postwar transition period it must attain the following objectives:

(1) The production of more goods than ever before.
(2) The acceptance of lower prices than ever before.
(3) The employment of more labor than ever before.
(4) The payment of higher wages than ever before.

Management will have need of all of its tools; and internal auditing both as one of the tools, and in its other function as a "tool sharpener," stands ready to do its part.

[4] Howard C. Greer in "Cost Accounting and Profits After the War," *Papers of the Fifty Sixth Annual Meeting*, the American Institute of Accountants.

THE BACKWARD ART OF TEACHING ACCOUNTING

JOHN N. MYER

When the accountancy graduate obtains his first job it is most likely that his employer will tell him to forget what he learned in college and to get adjusted to accountancy as it is practiced. This statement by the employer is, of course, only a conversational exaggeration, for he does not really mean that everything taught in the accountancy courses is wrong. But from observing the equipment of the college graduates in his employ he gets a pretty definite impression that what goes on in college courses is far from what might be desired. It is the opinion of the writer that there are two causes for the current discrepancy between the academic world and the business world: (1) faulty text material, and (2) lack of standards for teacher qualifications.

ANTIQUATED TEXTBOOKS

The existing textbooks either were written about a quarter of a century ago or were modeled after those written at that time. The fundamental defect in these texts is that they are governed by the fallacies inherent in the balance-sheet approach: (1) that the balance sheet shows the financial condition of a business; (2) that it states what the assets are worth; and (3) that it shows what the business is worth. Of late there have appeared slight variants such as a presentation of the profit and loss statement before that of the balance sheet. This, however, makes no material change, for as soon as the balance sheet is introduced it dominates the discussion, which then lapses into the typical balance-sheet approach.

A few examples of antiquated teachings will be illuminating. The subject of depreciation is a fertile field. One widely-used text defines depreciation as "the decrease in the value of fixed assets caused by wear and tear and the action of the elements," and it goes on to say that "the debit balance in the asset account minus the credit balance in the reserve account represents the depreciated value of the fixed asset." The author, to be sure, does mention that the profit and loss statement "will not be correct until a deduction has been made for depreciation, which is one of the expenses incurred in using the equipment." But it will be noted that the explanation of accounting depreciation is in terms of asset valuation, whereas the contemporary point of view is to regard accounting depreciation as the process of apportioning a prepaid cost as a deduction from income and regarding the residual valuation as a deferred cost.

In some recently published books one can observe an effort at modernization. One author states that "The term ***net worth*** is not used in this text . . . ." However, on several occasions he forgets this rule. In presenting a "balance sheet in nontechnical terms" he has a caption "we were worth" to indicate the capital of the business. Also, when discussing the analysis of the balance sheet he uses the ratio of "total debt to tangible net worth" and the ratio of "fixed assets to tangible net worth." The use of the word "tangible" seems to give added assurance as to the worth of the business as stated. Although such writers affect a veneer of modernization they usually fall into the antiquated pattern.

These examples reflect outmoded concepts and terminology. The existing textbooks are antiquated particularly because during the past fifteen years there have been introduced many new procedures that have not been absorbed into these texts. For example, the scope of the profit and loss account and the profit and loss statement has been broadened to include items which formerly were not included therein, such as unusual profits and losses that are not a result of regular operations. According to the rules laid down in most of the existing books, unusual or extraneous profits and losses are to be closed not into profit and loss, but into surplus.

A recently published text, in discussing loss on sale of assets, states: "According to strict accounting theory, the *Loss on Sale of Assets* account should be closed into *Earned Surplus* because it evidences the fact that the past periods were charged with insufficient depreciation. In practice, however, the *Loss on Sale of Assets* account generally is closed into *Profit and Loss* and appears as a nonoperating expense item in the profit and loss statement." Although the author here teaches accepted contemporary procedure he appears loath to break with past teachings and therefore effects a compromise. He does not seem to realize that accounting procedure is changing and that what is taught in the classroom should be changed as practice changes. There is no such thing as a strict or sacred code of theory.

Another example of antiquated procedure is afforded by the case of reserves. The old texts usually make much ado about which reserves are created by a debit to profit and loss and which are created by a debit to surplus, thus representing appropriations of surplus. Today the usual practice, as evidenced by the schedules filed with the Securities and Exchange Commission, is to create practically all reserves by a debit to profit and loss; rarely does one find in contemporary statements reserves that are merely appropriations of surplus. It would appear that it has been realized that such appropriation accounts have no material effect and that any sums

which a board of directors does not see fit to use for dividend purposes might just as well be left in the surplus account.

In discussing war reserves in a magazine article, one writer of the old school, while admitting the contemporary procedure of creating these reserves by a debit to profit and loss, says: "It is difficult to reconcile these methods of handling war reserves with sound accounting theory." He also seems unable to accept the fact that the underlying principle has changed. In contemporary procedure all foreseeable costs and losses are charged against current revenues when it is possible to allocate them in a reasonable manner. It is absurd to say that what accountants are generally doing is a violation of "strict" or "sound" theory, since what might be called accounting theory can be only generalizations of what is accepted practice among accountants.

And so one could continue pointing out the antiquated notions of the existing texts. However, they will not continue to bedevil the graduate who obtains a position in accounting work, provided that he follows the advice of his employer. But many people will be unable to reorient themselves, especially those who do not become accountants but who study accountancy because they have need of some knowledge of it in connection with their professional work; among these are engineers, lawyers, credit men, investment men, statisticians, and economists. They are more concerned with the interpretation of accounting data than with accounting mechanics.

INTERPRETATION A NEGLECTED PHASE

But there is very little concerning the interpretation and use of accounting data to be found in the textbooks, because accountants have not given the matter sufficient attention. And what is to be found in the texts concerning interpretation is material borrowed from the writings of non-accountants who have sought to supply what accountants have not supplied. Most of this literature, however, has no validity since it makes the tacit assumption, contrary to fact, that accounting data are absolute rather than relative. Particularly is this true of the subject of ratio analysis, a matter which has been much overdone in most quarters. If you have a confidential chat off the record with one of the textbook writers he will probably tell you that this is a subject which is in an experimental stage, that it has been included in the book because it is interesting, and that it is not to be taken too literally or too seriously. But usually no such caution is reflected in the text, and the student can hardly do otherwise than take it literally, particularly when he faces the ordeal of an examination which may include a question on that subject.

Later, in their graduate work, such students may write theses describing how businessmen measure the condition of their businesses by comparison of the ratios in their statements with the standards in the industries in which they are engaged and how credit men extend credit on the basis of such ratios. And the pedagogues join in perpetuating this myth. Recently one of them wrote concerning standard ratios that "these ratios are in general use by thousands of businessmen in almost every line of business activity." But where are the businessmen who use these things? If there are any such let them come forth and tell all about it.

STATEMENT OF FUNDS

One of the alleged uses of accounting data to be found in the textbooks employs the device known by the title of statement of funds, or some variation thereof. The writer has demonstrated[1] that this

[1] "Statements Accounting for Balance Sheet Changes," ACCOUNTING REVIEW, Vol. XIX, No. 1, January, 1944, pp. 31–38.

statement as usually outlined in textbooks is a fallacy. In more than two years since the publication of his demonstration no one has offered a criticism of his work; therefore, he assumes that his exposition has been accepted by his readers. However, he desires to make a special appeal at this time for further discussion of the subject.

The statement of funds is one of those textbook topics which among the members of the accounting fraternity are regarded as not to be taken too seriously. But again, there is usually no caution about its use to be found in the texts. The present writer has discovered that various economists who apparently have read about this thing in accounting textbooks have taken it most seriously and that there has appeared an ever-growing spurious literature based on the fallacy of the statement of funds. Three cases might be cited as examples.

The first is a certain governmental economic report. Its author devotes considerable space to a study based on the funds statement. He states naïvely that this device "traces the flow of funds through an enterprise" and he is surprised that, "although accountants have long been familiar with such a flow of funds statement the standard accounting text rarely devotes more than a few pages to it, however, H. A. Finney's ***Principles of Accounting*** is one exception." He also points out that the device "has been largely ignored by economists until recently" but that "this approach has since been taken up" by various important organizations and that a certain economic research bureau "is planning to employ this technique in its proposed study . . . ." The author then in glowing terms describes the alleged virtues of the device: "The utility of the source and disposal of funds statement is apparent at first glance. It tells, for a given time period, from what sources the cash funds of an enterprise are derived, and what use is made of these funds."

There can be no doubt that this economist has been misled by taking seriously and accepting literally the description of the funds statement found in an accounting text. Particularly should it be noted that he has been led to interpret the word "funds" as meaning cash (which it cannot be) and this is because the text he probably consulted gives no definition of "funds." As has already been concluded by the present writer, it is deplorable that the words "funds," "provisions," and "applications" were ever introduced into the discussion of the device in question, since its only purpose can be to account for changes in account balances and not for what might be provisions and applications of something incorrectly called "funds."

Then there is the case of the study of the research bureau referred to above explicitly based on the "funds" device. Its author commences his description of the "funds analysis" by saying: "Among the methods of analysis used by accountants to study the financial position of business enterprises is one which deals with their sources of funds and the uses to which funds are put." Again, it is apparent that this author has taken the accounting texts seriously and also has obtained the impression that accountants actually use the funds statement as described in the texts. To be sure, some such device is often applied by business executives to the data of their own business, with which they have thorough familiarity, in a form adapted to their own particular purposes. But the statement as found in the textbooks, for obvious reasons, has not been accepted by the accounting profession although occasionally a public accountant uses it, possibly in response to the wishes of a client who desires an elaborate report; and some large corporations have used it in a garbled version in their reports to stockholders.

The author of this study explains "funds" as follows: "As used in this connection, the term 'funds' may have different meanings, depending upon the use to which the analysis is to be put. Usually it represents cash or its equivalent in financial transactions." But what text describes the various methods that would yield the different results depending on the different meanings of "funds"? The author ignores this point and outlines the usual textbook procedure, using an illustration so oversimplified that it constitutes an exposition contrary to fact since it ignores transactions which are bound to occur in even the smallest business if it has reasonable activity. Because this study is based on a fallacy, its conclusions can have no validity—a pitiful case for which the blame must be put at the door of the accounting texts that have misled the economist.

The third case in point is that of a doctoral dissertation written at a great university. This dissertation states regarding "the source and application of funds analysis" that "This accounting technique makes it possible to use business financial statements, amplified by data submitted to the Securities and Exchange Commission, to reveal the flow of money to business and away from it over a period of time." And then it proceeds to state that "By assigning the outgoing flows to the consumer, industrial, financial, or government markets, it is further possible to study the relation between business decisions and changes in the volume of the dollar flow in each of the major markets." But since it is not possible by means of the funds statement to "reveal the flow of money to business and away from it" the conclusions of this dissertation, as in the case of the two studies mentioned above, can have no validity. It is but another case of waste motion caused by taking too literally and too seriously a certain chapter in an accounting text.

DEPRECIATION AS A SOURCE OF FUNDS

There are various fallacious by-products of the "funds" analysis, probably one of the most curious being the doctrine that depreciation is a source of "funds." The dissertation under examination has a table of the "flow of business funds in the United States" and from this table one obtains the amazing information that in 1932 depreciation was a "source of funds" to the extent of $5,549,000,000. This statement is, of course, paradoxical, and it takes considerable effort on the part of an accountant to trace the way in which the author arrives at it. Its roots are to be found in the accounting texts.

According to the reasoning of the "funds" analysis the net profit as shown in the profit and loss statement, or "funds provided by profits," does not represent the total funds provided by operations since there was a deduction from income that did not require the expenditure of "funds," namely, depreciation. Therefore, to obtain the correct amount of "funds" provided it is necessary to add the amount of the depreciation charge to the net profit. Instead of regarding this addition merely as an adjustment of the "funds provided" some writers have singled it out and made it a theme for philosophical disquisition, giving it the title of "funds provided by depreciation." But there are two fallacies here: (1) Since the word "funds" as used has not been clearly defined, the adding back of depreciation gives no clear result. (2) The economists in philosophizing about the "funds provided by depreciation" have neglected the fact that many other deductions may have been made for expenses applicable to the current period that were paid for in previous periods and did not require the expenditure of "funds" in the current period, for example, discount on bonds, organization expense, patents, insurance, supplies, and a host of other expenses. It would be just as logical to com-

pute the amount of "funds" provided in the United States by amortization of bond discount or prepaid insurance as by the amortization of fixed property costs (depreciation).

Having developed the theory that there is an accrual of a "fund" of wealth in business because of the depreciation charges, the economists attempt to study the use of the "fund" for the replacement of the depreciated assets. In the study by the research bureau mentioned above one finds this: "The bookkeeping recognition of wear and tear on property by charges for depreciation and the expenditures on property do not occur simultaneously. This difference in timing may lead to the availability at given periods of time of disposable funds from depreciation accruals for general corporate purposes."

All this seems strange to the accountant, but curiously enough it is to be found here and there in accounting texts written by authors who desire to develop the subject along philosophical lines. One of the texts elaborates this theme under the caption of "maintaining the integrity of fixed asset investment." This text explains that since the current funds received each period represent an amount equal to the net profit plus depreciation, "current funds are increased each period by more than the amount of net profit, such excess being the exact amount by which depreciating assets have been decreased in value through the periodic depreciation charge. In this way the depreciating charge effects a transfer each period from the fixed asset group to the current group and so maintains the integrity of the capital invested in fixed assets." There is, of course, a grain of truth in this philosophical excogitation, for, when there is a net profit, a business has covered all costs, including depreciation. However, this author is in error in stating that the excess provision of wealth over and above the net profit is the "exact amount by which depreciating assets have been decreased," for he has overlooked the fact that there are usually other deductions from income not requiring an outlay of "funds" during the period, also that there might have been a disbursement for expenses that have at the closing date been deferred. The depreciation cost, along with all other costs, has been recovered if there has not been a net loss; but it serves no useful purpose to isolate the depreciation cost recovery.

Since the subject of studying the "flow of funds" by the usual "statement of funds" is a fallacy further discussion is futile. This, however, is but another instance in which an author in a philosophical mood has written something that he did not intend should be taken too literally. But he has given no such warning, and as a result economists not well grounded in accountancy have taken this discussion literally and proceeded to compute the dollars of wealth created by the depreciation charges of accountants and then attempted to study the uses made by corporations of this alleged fund, either for replacement of assets or other purposes.

TEACHER QUALIFICATIONS

Probably the most important qualification of a teacher of accountancy is the ability to explain and expound accountancy as it is practiced. To be able to do this he must have had practical experience; accountancy is an essentially practical subject and anyone who has not had practical experience can hardly present a vivid exposition. For the teacher of general accountancy the experience gained in actually keeping books is undoubtedly preferable to the auditing experience obtained in public accounting work. Of course, public accounting experience is essential for the teacher of auditing.

A second qualification is that he have

the ability to keep in contact with current thought in the world of accountancy by intelligent reading of magazines, pronouncements of authoritative bodies, etc. This will enable him to overcome to a considerable extent any shortcomings in the textbooks. It should be mentioned that there must of necessity be shortcomings, for these exist not merely because of such defects as have been mentioned above but also because it is not possible to keep a textbook constantly up to date. A textbook, after all, is but the text or minimum for a course; the teacher must breathe life into the course and make it realistic.

There has been very little discussion of the matter of qualifications for college teachers of accountancy. Recent discussion has centered about whether the Ph. D. or the CPA is preferable. Neither is necessarily a good yardstick. Broadly speaking, the Ph.D. degree is at best a label awarded to one who has shown ability to perform specialized research. But as Nicholas Murray Butler has said regarding the college teacher: "What is essential is that he should have a sound and scholarly comprehension of the subject matter of that which he is to teach, as well as skill and tact in its interpretation to younger and less developed minds. The high degree of specialization in study to which the doctor of philosophy has become accustomed is precisely that which is to be avoided in college teaching."

The holder of a CPA certificate has qualified himself to practice public accounting and this does not necessarily mean that he is qualified to teach accountancy. At best, he has spent some time in the employ of a certified public accountant in which period of time he may not necessarily have learned anything of importance; and he has passed an examination which is an elimination test, not necessarily a test of his knowledge of actual accounting procedure. Although these degrees and certificates are poor measures of ability to teach they are the criteria used by college administrators in appointing teachers because, in the words of Frederick P. Keppel, they are "a substitute for the tiresome process of really finding out something as to the professional and personal qualifications of individual human beings."

The matter of teacher qualifications is an important though neglected subject and one that cannot well be treated by an individual, since the opinions of an individual are not likely to have any tangible effect. There should be discussion of the subject by a representative body; therefore the writer recommends that it be studied by the American Accounting Association with a view to preparing standards for qualifications of teachers of accountancy.

BASIC EDUCATION FOR ACCOUNTING IN BUSINESS

JOHN W. McMAHAN

Two principal considerations led me to this choice of subject. First, there should be a mutuality of interest, and therefore a certain coordination, between the teacher of accountancy and the practitioner. Both are interested in the same student product. There is some formal recognition of this mutuality of interest in the relationship that exists between the American Institute of Accountants and the American Accounting Association. This is good. But the emphasis in this relationship rather naturally tends to be one-sided; the emphasis is almost exclusively upon financial accounting. Without counter-poise, it tends to perpetuate an unbalance which is now present in the structure and content of accounting education where, particularly in the large schools, the focus in one way or another is largely upon the public accountant and the practices of public accounting.[1] Some alignment between the NACA and the American Accounting Association, so it would seem, would provide encouragement to a conscious and careful consideration on the part of educators of the managerial point of view.

The second consideration has to do with the first. It is the implication of a recent statement of a practitioner: "Compared with cost accounting, financial accounting today is, in my judgment, crude, timid, hidebound, and unimaginative."[2] Commenting on this statement, Professor Littleton says, "If we understand better how industrial accounting got where it stands, we probably could work more intelligently at the task of helping financial accounting to catch up."[3] And to this one might add: to help accounting education catch up to the needs of the majority of its students and their prospective employers, since most accounting graduates go into industry and not into public accounting.

The point is clear. If financial accounting is "hidebound and unimaginative" and college training in accounting is largely dominated by the conventions of financial accounting, as I think most will agree is true, then evidently educators and their institutions are not doing the best possible job for their students or for their future employers. A change in the direction of balanced emphasis is needed.

ACCOUNTING CONVENTION AND ACCOUNTING EDUCATION

No one, I think, has read Mr. May's *Twenty-Five Years of Accounting Responsibility* and/or his more recent *Financial Accounting* without stimulation and thrill to those broad, heavy, but nimble, strokes with which he paints his long experience in public accounting. His principal theme, variously presented and repeated, is that accounting is largely a body of business conventions, many of which are out-worn and in need of betterment, retirement, or replacement. He likens accounting to the common law in its development and slow yielding and flexing to the needs of society. But, while he believes this characteristic to be the principal principle of accounting, he is impatient with its *stare decisis*—standing by precedent.

As Mr. Woodrow Wilson once asked of

[1] A. C. Littleton, ACCOUNTING REVIEW, XX, 2, p. 236.

[2] Geo. O. May, "Teaching Accounting to Non-technical Students," ACCOUNTING REVIEW, XX, 2, p. 133.

[3] *Loc. cit.*

the common law, Mr. May now asks whether accounting must always look backward and never forward. "To my mind, a necessary step in the development of higher accounting education is to free ourselves from the shackles of accounting fundamentalism. . . ."[4]

It should, of course, be recognized that conventions have their positive as well as negative side. If law or accounting practice or instruction were to fail to observe precedent, business and students at any particular moment might not know where they were. However, it is the negative side to which attention is needed: the tendency toward stereotyped thinking and instruction in accounting. It is in this sense we make the observation that the anchors of financial accounting conventions are thoroughly imbedded in accounting education: in the curriculum, course content, and the instructor's mind.

This is no doubt natural; for the public accountant is much in the public eye and has a public responsibility. The professional accountant is customarily thought of as the public accountant. It was the public accountant who developed accounting doctrine in English-speaking countries as a first mark of a profession. When schools began to teach accounting they quite naturally sought their teachers from that group which had produced a publicly recognized doctrine. Accounting doctrine as taught in universities and colleges became, and still is, quite understandably the doctrine of financial accounting.

However natural is the explanation of the situation that obtains in accounting education today, it has resulted, or at least has assisted, in the creation of an unnatural situation in accounting in general and accounting education in particular. At bottom "accounting shackles" are related to this unnatural situation. This leads me to deal with the nature of accounting, for if this is properly recognized it will point to a more natural situation in accounting education and thinking.

[4] *Loc. cit.*, p. 134.

THE NATURE OF ACCOUNTING

We customarily think of the natural function of accounting as being a language function. Since at least the fifteenth century, accounting has been used to describe the financial status and motion of the business enterprise. The reason accounting makes sense and not nonsense is because it is logical. Its technical sentences are logical propositions. Accounting method is logical method; at bottom, the nature of accounting is logic, reason. When we consciously recognize and teach this we are taking the first step necessary to free ourselves of "accounting shackles."

Let me illustrate the point that accounting method is logical method by reference to the customary sequence of accounting procedure. The first step of accounting procedure customarily involves the use of primary business documents, such as invoices, requisition tickets, etc. These documents work the performance of the first step of logical method, namely, the observation of the facts. The facts on the primary documents are next assembled and sorted by means of the primary journals, thus performing the second and third steps of logical method. By means of the general and subsidiary ledgers the facts are further assembled and sorted, thus repeating the second and third steps of logical method in order to secure further compression of data. Finally, the many facts are meaningfully related to each other in the light of two leading questions: (1) What is the financial condition of the business today? and (2) What is the net income for the past accounting period? The financial statements perform the last step of logical method: present the related facts, in the light of the questions asked.

The most effective device to demonstrate to students the nature of accounting is an IBM installation. The student gets

the point quickly as he sees: (1) the key punch observe the facts; (2) the operator assemble the facts by assembling the cards; (3) the sorting machine sort the facts; and (4) the tabulator group the facts in a meaningful predetermined manner.

We need not belabor the point that the nature of accounting method is the method of reason. However, to this observation we need to make a very important addition. In order to function, reason must have some *thing* to reason about and some *purpose* for so doing. There must be some *thing* to taste, see, feel, hear, or smell; there must be some *purpose* in light of which the facts observed by the senses can be ordered. The thing that is the object of study in accounting is the business enterprise. Or, better than "enterprise" we may say "human association"; for more and more accounting is applied to group effort that is not strictly of a business nature—governments, hospitals, religious orders, etc. Theoretically, the purpose of accounting is to help someone know the business (human association); practically, its purpose is to give someone knowledge so that the achievement of desirable ends can follow—ends such as the proper rewarding of the factors of production engaged in the business—and, thereby, to improve in some measure the material well-being of society.

That it is the nature of accounting to provide business knowledge is a point clearly demonstrated by the history of accounting. The history of accounting furnishes a record of the various steps by means of which reason has built an avenue to knowledge of the business enterprise. This record itself reveals the operation of the thinking process (observe, assemble, sort, and coordinate the facts).

THE CONVENTION OF FINANCIAL ACCOUNTING

It is often revealing to go to the beginnings of a profession for the purpose of comparing and contrasting original and present-day conceptions of scope, content, and purpose. Development through the years invariably brings about professional specialization. Often there is accompanying confusion and lack of unity in the conception of the profession's scope, content, and purpose. It sometimes happens that the function of some specialty, for various reasons, comes to dominate the profession and is popularly identified with the profession. Accounting is no exception.

About forty-five years ago the *Public Accountant*, a publication of the Pennsylvania Institute of Certified Public Accountants in Philadelphia, solicited from practitioners an exchange of views as to exactly what was the province of the public accountant. One of the most interesting replies received was from Mr. Charles W. Haskins of New York City. Mr. Haskins wrote:

> "The public accountant is the consulting physician of finance and commerce. He understands the anatomy and physiology of business and the rules of health of corporations, partnerships, and individual enterprises. He diagnoses abnormal conditions, and suggests approved remedies. His study and interest is the soundness of the world of affairs."[5]

Mr. Haskins's definition suggests that he conceived the public accountant as being essentially a business economist and accounting as an aspect of business economics.

However, even in 1900, Mr. Haskins's conception of public accounting reflected a minority view; the majority of the 29 replies received and published by the *Public Accountant* emphasized the public responsibility of the public accountant and the commensurate need for integrity and truthfulness. "A public accountant acknowledges no master but the public, and thus differs from the bookkeeper whose acts and statements are dictated by his employers." "He should have undoubted

[5] Norman E. Webster, "The Meaning of Public Accountant," ACCOUNTING REVIEW, XIX, 4, p. 374.

integrity."[6] And this has been the continuing and natural emphasis of the public accountant. In one sense the ultimate welfare of the business unit is of no direct consequence to him; his job is to ascertain and report the financial facts.

As previously pointed out, this natural concern of public accounting with the public and the natural tendency for many people to identify "an accountant" as a public accountant have unconsciously resulted in the identification of accounting in general with financial accounting in particular. That is to say, thinking in accounting habitually tends to identify accounting with the single function of income measurement. This conventional emphasis, which is also evident in accounting education, would not be so bad if in presentation it were first already related to the task that faces management and the importance of accounting in that light. But generally even income determination is related almost solely to the task of public reporting. The conventional emphasis therefore tends to shift the focus of accounting away from its natural object (management of the business) and from its natural purpose of providing knowledge to assist in the achievement of the practical ends of business (earn profits, produce economic goods and services, improve the material well-being of society).

The identification of accounting function as the measurement and public reporting of income is, in my judgment, one of the shackles of accounting fundamentalism; perhaps it is even the most confining. And because accounting education is largely built on this same identification I am of the opinion that an unnatural situation exists in accounting education. A change is advisable in the direction of waking a conscious study of the business as such.

What is the basic reason that Mr. May finds cost accounting imaginative, venturesome, and unconventional? The answer to that question, I believe, is that the cost accountant has been primarily a student of the business. And in this study he was often greatly aided by knowing little, if anything, about accounting as conventionally conceived. Indeed, at times his greatest asset was that he didn't know a debit from a credit. However, he did know how to observe, assemble, sort, and coordinate facts about the business. Furthermore, he has received immeasurable aid from the necessity of working and cooperating with specialized knowledge, abilities, and skills of every hue of the rainbow: engineers, chemists, salesmen, personnel men, lawyers, managers, psychologists, publicity men, idea men, foremen, operators. He has been enrolled in a kind of liberal arts school in business, engaged in a sort of rough-and-tumble coordinated research about the business enterprise.

In brief, the cost accountant has been first concerned with "knowing" the business enterprise and second with putting that knowledge into the accounting form. This is the right order of things and is fully consistent with the fundamental nature of accounting. It should provide the pattern, in my judgment, for basic education in accounting.

ALTERING A CONVENTION

The student who concentrates on accounting in schools of business usually graduates with 25 to 40 semester hours of accounting, of which from 70 to 80 per cent is financial accounting. In so far as he gives any conscious attention to accounting through managerial eyes, it is limited to a few hours of cost accounting and budgeting. Even here the emphasis is most often upon the presentation and the learning of certain techniques. The acquisition of techniques is, of course, important. The

[6] *Ibid.*, p. 373.

"know how" is always important; but the extent of one's ability to use his "know how" effectively is determined by his grasp of "know why."

All of this is so obvious it is trite. But that is just why it must be pointed out again and again. The old maxim bids us "Beware of the obvious; for it is most often missed."

Accounting education is shackled with the convention of "know how." If financial accounting is to be freed of what Mr. May calls "fundamentalism," accounting education should alter the existing convention of accounting instructional emphasis or retire it altogether. How is this to be accomplished? Study the business enterprise. The beginning and continuing focus of the accounting student should be upon the business unit. It should become for him what the human body is for the young medic, namely, his principal object of study, his main source of knowledge.

THE BUSINESS ENTERPRISE

If the student is to be prepared to give an accounting of the business unit to any interested party—management, government, or employees—he must know the business. Basic accounting education should begin, therefore, as does the study of medicine, with the study of anatomy and physiology—in this case, of course, with business anatomy.

The anatomy of the business body is its structure or organization. It is concerned with the cells out of which organization is built. Any association of human beings must first of all have an objective. To achieve this objective requires functions. Functions invariably require a combination of personnel and certain physical tools or operation factors. Work towards an objective requires someone to say "heave ho" —a leader. The leader must have some plan of action or policy in pursuing the objective. Consciously or unconsciously, the ideals of the leader determine the policy. The leader, of course, cannot lead unless he is the representative of a legitimate and recognized ultimate authority. And, finally, cementing all these cells together (ultimate authority, leadership, policies, ideals, functions, physical factors, personnel, and objective) there is morale.[7] These cells make up the muscle tissue and bone structure of the business body.

Turning to the role or function of these parts (what was previously referred to as the physiology of the business body), it should be noted that there are certain basic factors involved in all operations. The basic factors of operation are procedure, control, and standards.[8] That is to say, before any human group undertaking may be put into effect or set in operation it is necessary that there first be a "plan of going forth," a procedure. If this plan is to be carried out most efficiently, control is necessary. And, finally, if there is to be control there must be a basis of judgment; that is, there must be standards.

These structural elements of organization and operation are likely to be present in all human associations, whether a business (financial, manufacturing, or distribution), an army, a college, or a hospital. A student who is thoroughly trained in their identity and interrelationship is equipped with knowledge by which he can mentally take apart any human association at all. The result should be a facility of mind in thinking about any business, or any human association. To me, this should be the objective of basic education in accounting.

Accompanying this knowledge of the bricks of organization and operation should be the development of the ability and skill of the student in giving visual

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[7] R. C. Davis, *Industrial Organization and Management* (Harpers, 1939), Ch. 2.

[8] *Ibid.*

representation, by means of charts, to the structure and operation of the business unit, or of any one of its principal divisions or departments. For example, the preparation of an organization chart is an excellent device for thinking through and visualizing the structure of a business or department, in terms of authority, leaders, and principal functions. Likewise a flow chart is an excellent means by which to understand a given procedure with its constituent elements of functions, physical factors, and personnel. If the student can visualize a given business or project in a graphic manner, he is foundationally prepared to think of such accounting aspects as systems and costing. Cost control, for example, is necessarily based on organizational responsibility.

There is one other specific advantage in using the structure and process of the business as the first and continuing focus of accounting education. It provides a natural clothesline on which to hang the consideration of specialized aspects of organization and operation such as legal, financial, and human.

The common fault of accounting education is that it takes for granted the business to which accounting is applied. It is as if the young medic were to learn his field by studying only hospital charts for patients, rather than studying the patients themselves. I am convinced that conventional accounting is too much with us and the business enterprise not enough with us. We are too prone to turn out business linguists and not business students. It should be our job to turn out students with business knowledge.

COMBINING THE FORECAST AND FLEXIBLE BUDGETS

R. P. Marple

Since business first adapted for its own use the budget idea which had been developed as a means of organizing and controlling the financial affairs of governments, several types or styles of budgets have been developed. To a limited extent, the appropriation type of budget common to governmental budgeting has been carried over into business. This type of budget involves the appropriation of a definite amount for a prescribed purpose and the limitation of expenditures to the amount appropriated. In business, budgets of the appropriation type have been pretty generally limited to the control of expenditures for advertising and for investments in fixed assets.

Until about the middle thirties most business budgeting was of the forecast or fixed type. In this kind of budgeting, forecasting and planning is the dominant theme. All items of income and expense are forecast in advance of the budget period; a coordinated plan or program is developed; operations are controlled in line with the budget plan; and the results for the period are compared with the budget to measure the nature and extent of the deviations from the budgeted goal.

To my mind, the greatest single advance in industrial accounting in the ten years preceding World War II was the development and rather general adoption of the principle of flexible budget. Based on a recognition of the difference between fixed and variable costs, the flexible or variable budget is a control device which recognizes that different expense allowances are necessary for different rates of activity. Briefly, it involves a predetermination of

fixed allowances and variable rates and their subsequent application to the rate of activity actually experienced, to arrive at allowable expenditures for that rate of activity. Comparison of the budget figures thus determined with the costs actually incurred provides a closer control than is possible when the cost allowances are based on forecast volumes which differ from the volumes actually attained. The flexible budget idea has been applied principally to the control of departmental overhead. However, in recent years its application has been expanded to cover the entire budget.

There has been a disposition in some quarters to look upon the principles of the flexible budget as incompatible with the principles of the forecast budget, and a feeling that a company can have one or the other but not both. To some extent this arises from lack of uniformity in terminology; your concept and my concept of what constitutes a forecast budget or a flexible budget may not be the same. It also arises from a misunderstanding of the function of each type of budget. This may be serious if it prevents a company from taking full advantage of both types of budgetary control. For this reason I should like to offer a suggestion as to how these two types of budgets can be coordinated to gain the greatest advantage from each.

The ways in which each type of budget contributes to industrial management will become clearer if we consider how each is used to attain the major objectives of budgetary control. It seems to me that budgeting has three major objectives or purposes:

First, it provides an organized procedure for planning; second, it provides a means for coordinating the activities of the various components of a business; and third, it provides a basis for cost control.

These three objectives—planning, coordination, and control—cannot be fully achieved by a forecast budget alone. Nor can they be fully achieved by a flexible budget alone. But a combination of the forecast budget and the flexible budget does provide the best known method of achieving these objectives. Let us see why this is so.

PLANNING

Planning is one of the primary functions of management. It involves decisions as to objectives and as to ways and means of achieving those objectives. The forecast budget provides an organized method of planning and a procedure for measuring the nature and extent of deviations from the agreed-upon plan.

In talking with various people about budgeting, I have often heard the argument advanced that the company in question could not use a forecast budget because sales could not be forecast with any degree of accuracy. Such a statement tends to overlook the fact that every business, whether it has a budget or not, must forecast and plan for the future. Every investment in productive facilities, every act of adding a productive worker, a salesman, or a clerk, every purchase of material and supplies for stock, in fact every truly managerial decision, must be predicated on some forecast of future business. You can't get away from the fact that plans and forecasts, expressed or unexpressed, are a preliminary to business action. The forecast budget provides an organized means for formalizing and coordinating the forecasts and plans of the many individuals whose decisions influence the conduct of a business. The accuracy of the forecasts is not so important as the making of forecasts and fitting them into a coordinated plan. Obviously, the best way of improving the accuracy of forecasts is to compare them with the actual results to determine in what respect the forecasts were in error in order that this factor of er-

ror may be reduced or eliminated. If the planning and forecasting are organized, and forecasts are compared with actual results, greater accuracy will follow with experience and acquired skill.

COORDINATION

The second objective of budgeting is the coordination of plans and activities. Here again the forecast type of budget is essential. Production must be planned in relation to expected sales, material acquired in line with expected production requirements, facilities expanded only as foreseeable future use justifies, and finances planned in relation to the funds needed for the expected volume of sales and production. Yet, if each of these decisions is made without relation to other plans and expectations, the result is almost certain to be unsatisfactory. The forecast budget provides a means of coordinating the plans of all divisions and departments of a business and of molding them into a single unified plan so that all departments may work together rather than at cross purposes. At the same time the forecast budget provides a means of testing the profit and loss results of a proposed plan and an opportunity for modifying the details of the plan to secure the most profitable end result.

COST CONTROL

It is when we come to the third objective of budgeting, cost control, that the weakness of the forecast budget becomes apparent. Cost control is predicated on the idea that by comparing actual costs with what the costs should have been we can determine out-of-line performance and take steps to correct it. For this process to be effective we need a good measure of what costs should be under any given set of conditions. The most important condition affecting costs is volume or rate of activity. When the forecast budget is used, the volume of activity is forecast and the expense allowance is set for that expected volume. If the actual volume varies appreciably from the forecast volume, as it usually will, the allowance based on a different volume is not a good guide or standard. It is most difficult under these circumstances to measure out-of-line performance and particularly to get the cooperation of those who control costs and who are likely to feel that their performance is measured against an inaccurate standard.

In the flexible budget this difficulty is overcome by predetermining what the expense should be for any given rate of activity and comparing the actual expense with the allowance for the rate of activity actually experienced. The flexible budget is based on the classification of expenses as fixed, variable, and semi-variable, and the breakdown of semi-variable expenses into their fixed and variable components. The actual rate of activity being known, it is possible to add to the fixed expenses (which remain constant at all rates of activity) an amount derived by multiplying a variable allowance by the rate of activity actually experienced, and thus to arrive at a good measure of what the costs should be. During the 1930's the flexible budget largely superseded the fixed or forecast budget for the control of factory overhead. However, the flexible budget alone is valuable principally as a basis for cost control. It does not replace the forecast budget as a basis for planning and coordinating the various activities of the business.

STANDARDS

Now, if we concede that the forecast type of budget is preferable for planning and coordination purposes and the flexible type for cost control purposes, the next logical step is to consider how the two can be combined so as to complement each other and reduce the duplication which two sets of budgets would entail. It seems that the use of standards is the answer to

this problem. The forecast and the flexible budgets differ principally in that one is prepared in advance on the basis of forecast volumes, whereas the other is prepared at the end of the period on the basis of the actual volumes. If the same standards are used in the preparation of both budgets and also on the books of accounts, the process of preparation will be simplified and the value of budget reports greatly increased. Application of the standards to forecast sales and production provides a forecast budget. Their application to actual sales and production provides a flexible or control budget. Comparison of the two will disclose the extent to which variations from forecast sales and production have affected the net profit shown by the forecast budget. Comparison of the flexible or control budget with the actual results developed on the books will reveal the nature and extent of all variations from the results which should have been accomplished in view of the actual volumes of sales and production attained.

A BUDGET REPORT COMBINING THE FORECAST AND FLEXIBLE BUDGETS

	Forecast Budget	*Control Budget*	*Per Books*	*Variances* *Sales Volume*	*Production Volume*	*Sales Price*	*Operating*
Sales	$90,000	$88,200	$85,200	$−1,800		$−3,000	
Standard Cost of Sales	55,000	53,900	53,900	+1,100			
Standard Gross Profit	35,000	34,300	31,300	− 700		−3,000	
Variances:							
Volume	−3,000	−1,800	−1,800		$+1,200		
Material Price			+ 200				$+200
Labor Efficiency			− 100				−100
Overhead Cost			+ 300				+300
Net Variances	−3,000	−1,800	−1,400		+1,200		+400
Gross Profit	32,000	32,500	29,900	− 700	+1,200	−3,000	+400
Distribution Cost	12,500	12,400	12,600	+ 100			−200
Administrative Cost	11,000	10,950	10,900	+ 50			+ 50
	23,500	23,350	23,500	+ 150			−150
Net Profit	$ 8,500	$ 9,150	$ 6,400	$− 550	$+1,200	$−3,000	$+250

Standards

			Fixed Amount	*Variable Rate*
Standard Selling Price	$ 9.00	Standard Factory Overhead	$9,000	$1.50 per unit produced
Standard Production Cost	5.50	Standard Distribution Cost	7,500	.50 per unit sold
Standard or Normal Capacity	15,000 Units	Standard Administrative Cost	8,500	.25 per unit sold

Volume

	Forecast	*Actual*
Sales in units	10,000	9,800
Production in units	10,000	12,000

\+ Signifies a favorable variance
− Signifies an unfavorable variance

EXHIBIT 1

THE FORECAST BUDGET

Exhibit 1 provides a simplified illustration of how the two budgets can be combined. The essential data in the form of standards and figures on volume are given at the bottom of the table. The company manufactures a single product; consequently no problem of mixture variances

is involved in the situation.

Let us refer to the forecast budget first. Sales and standard costs of sales are developed by applying to the forecast sales volume the standard selling price and the standard production cost. The difference is the forecast standard gross profit.

At this point in the development of the forecast budget we face the problem of deciding whether prospective variances from standard costs should be forecast in order to arrive at budgeted actual gross profit. Whether or not this will be done depends, of course, on how tight the standards have been set. In the early days of standard costs there was a tendency, particularly among engineers, to base standards on maximum or ideal performance in order to measure the deviation from the best possible results. Such standards had definite limitations for accounting purposes, and gave illogical figures for inventory valuation, pricing, and other purposes. For this reason the so-called ideal standard has been largely replaced by what may be described as current or attainable standards, although the name "ideal standards" may still be applied to them.

Attainable or current standards are intended to reflect the expected performance for the period for which the standards are set. But even with current or attainable standards the tendency has been to set them sufficiently tight so that some debit variance would result. Labor standards, for example, have been set at what a man should be able to do most of the time, not at an average of his good and bad performance. A workman may make the standard 90 per cent of the time, but fall below standard the rest of the time. To set the standard on the basis of his average performance would be to condone the fall-downs, reduce the incentive, and include the cost of such fall-downs in inventory values, rather than eliminate them as variances. Thus, in the typical case some estimate of variances would ordinarily be included in the forecast budget. Probably this will be a more important factor in the period immediately ahead than in more normal times. Many companies, realizing that loss in efficiency during the war will need to be overcome to meet postwar competition, will set their standards tighter than current performance will justify, and can expect to accumulate sizable debit variances until the prewar efficiencies are regained. However, in the present illustration no variances from standard other than the volume variance have been included.

The volume variance is readily calculated by determining the portion of the fixed costs applicable to the normal capacity which will not be utilized for the volume of production which is forecast. In the illustration 10,000 units are to be produced in a plant with a normal capacity for 15,000 units. Thus, one-third of normal capacity will be idle and one-third of the fixed factory overhead of $9,000, or $3,000, will show up as volume variance or unabsorbed overhead.

In the illustration it is assumed that the expenses of distribution and administration have been analyzed and classified as to fixed and variable components, so that the allowable cost can be adjusted to the sales volume. For the forecast budget, the amounts are developed by adding to the fixed allowance the product of the sales volume in units multiplied by the variable rate. Thus, for distribution cost a variable allowance of $5,000 (10,000 units × 50 cents) has been added to a fixed allowance of $7,500 to arrive at a total of $12,500.

THE CONTROL BUDGET

Now let us assume that management has reviewed this budget and accepted it as its goal for the budget period. At the end of the period it is found that the actual sales have been 200 units less than forecast, whereas the actual production has been

2,000 units more than planned. By applying the same set of standards to these actual volume figures the flexible or control budget shown in the second column is developed.

It will be noted that although actual sales were below the forecast, the net profit shown by the control budget is greater than shown by the forecast budget. Admittedly this is an unusual situation, but it has been introduced here to illustrate a point which is too often overlooked. The explanation for the condition is found in the increase of actual production over forecast production. By manufacturing 12,000 units, or 2,000 in excess of plans, this company has been able to utilize a larger proportion of its capacity than had been planned, and thus reduce the volume variance or loss from idle capacity. This is what is sometimes called "selling overhead to the inventory," for the reduction in unabsorbed overhead has been made possible by a building up of finished product inventories. In a comparative statement of this type this arises if actual production exceeds planned production; in a single income statement it arises if production volume exceeds sales volume. This point has been introduced because it seems that the accountant should be constantly on the alert to locate and point out in his reports the extent to which reported profits have been influenced by a variation between the rates of sales and of production.

Once the forecast and control budgets have been prepared it is possible to develop the variances which are due to a difference between the forecast and actual sales and production volumes. In the illustration $1,800 of sales revenue, $700 of gross profit, and $550 of net profit have been lost because of failure to reach the sales goal. This is more than offset by the favorable production volume variance, due to a 20 per cent greater utilization of normal capacity than was originally planned. In developing the sales volume variance it will be noted that a favorable variance is shown for distribution and administrative costs, resulting from the treatment of a part of these costs as variable with the rate of sales. With reduced sales the allowance is less, creating a favorable offset against the gross sales volume variance.

COMPARISON WITH BOOKS

The next step is to record in the third money column the actual results for the period as developed on the books. Here we have the actual variances from standard cost as accumulated on the books. The volume variance is the same as in the control budget, since both figures are based on the same volume of production. Comparison of the book figures with the control budget develops the controllable variances due to sales price and operations.

After the statement is completed, it is possible to develop some interesting information from it. Actual net income has been $2,100 less than forecast, because of a small decrease in sales and a shading of sales prices, offset by a doubtful gain from operating the plant at a higher rate than necessary to maintain inventories and by a $250 saving in operating costs. I am not suggesting this type of table as a report for management; in actual use it would be too detailed for executives not trained in accounting. Rather I am suggesting it as a means of analysis for the accountant's use and as an illustration of the way in which the principles of forecast budgeting can be most advantageously combined with the principles of flexible budgeting.

THE SALES FORECAST

I believe it is obvious from the discussion so far that the usefulness of the forecast budget for planning and coordination purposes is largely dependent on the way in which the sales forecast is developed. Let us consider this in more detail.

The sales forecast, once made, is used in many ways. In addition to its use in planning production and finance, it serves as a base for measuring sales performance. Thus, in effect, it becomes a standard for measuring results, and, like any other standard, should be set on a basis which measures as accurately as possible what can be considered good performance. This applies alike to the over-all sales goal and to its subdivisions by product lines, sales territories, and even individual salesmen.

In setting labor standards we are inclined to frown upon the use of unsupported estimates and to favor time studies as a better method. In the same way, it seems to me that we should frown on sales forecasts which merely reflect someone's estimate of what sales can be made under the conditions which are expected to exist for the forecast period. The statistical methods which have been developed for forecasting product sales volume may not be as accurate as the methods used for the time study, and more allowance may need to be made for the considered opinion of the sales personnel. The use of statistical methods, however, does provide a better base for measuring sales performance than does an unsupported sales department estimate, because it does permit some measurement of the effect of general business conditions on variances in sales volume.

What I am suggesting is that the sales forecast be related to that index of business conditions with which past sales of the company show the greatest positive correlation, and that the sales be forecast by first forecasting the level of the index for the budget period. If this is done, it is possible, when actual volume and the actual level of the index have been determined, to measure the influence of both business conditions and the sales department on the results accomplished.

Each company should endeavor to locate that general or specific index or to develop a composite index, which correlates as closely as possible with the past trend of its total sales or specific parts of its sales. Indices of industrial production, department store sales, bank clearings, new construction, auto registrations, etc., may be plotted against company sales adjusted for seasonal variations and the long-time or secular sales trend, to locate the index or indices which tend to move up and down in about the same way as the company's sales. Often the combination of two or more published indices will provide a more positive correlation than a single index. Even though sales may tend to vary more or less widely than the index (that is, the amplitude of the fluctuation may be more or less) this is not a disadvantage if the percentage of variation between the two is reasonably constant, since adjustment can be made for this known factor. If the index tends to move upward or downward before the same trend is reflected in the company sales, an additional guide in forecasting sales is provided.

In suggesting the use of a business index as a guide to sales forecasting I am not overlooking the value of studies of long-term trends of sales, of seasonal indices, of market analysis, of the study of territorial potential, and of the judgment of the sales personnel. Nor am I suggesting that sales forecasting is a job for the accountant or the statistician. What I am suggesting is that the forecast be tied to some estimate of the conditions likely to prevail during the budget period, that such estimate be tied to an index which can be used to measure the extent to which the conditions vary from those forecast, and that this information be used to determine the extent to which the variance of actual from forecast sales is affected on the one hand by business conditions and on the other hand by the activities of the sales department or any division of it. What this does is to

apply the principle of the flexible budget to the measurement of sales performance. In the factory, allowable expenditures tend to vary with the volume or rate of activity; in selling, sales volume tends to vary with the economic climate—the ups and downs of business conditions. Just as we measure the performance of a foreman against a standard adjusted to actual volume, so we should measure the performance of the sales department against a standard adjusted to the actual conditions which prevailed during the budget period. The use of business condition indices in forecasting sales makes this possible.

To illustrate, suppose the sales department, in forecasting sales of $125,000 for a product line for the budget period, states that this figure is based on a forecasted level of 125 for the index being used. The actual sales amounted to only $123,000, but the actual index for the period averaged 122. Isn't it logical in such a case to measure the performance of the sales department against the adjusted standard of $122,000, and to say that its performance has been better than standard, than to charge it, because of an error in estimating, with below-level performance? As every accountant who has had experience with standard cost knows, treating errors in the establishment of standards as falldowns in performance can have a most demoralizing effect.

THE MIXTURE VARIANCE

In Exhibit 1 the problem of sales mixture variance was avoided by assuming that the company manufactured and sold a single product. This, of course, is not a usual situation and I should like to discuss briefly the procedure for developing the mixture variance. In a company which sells a variety of products, each with a different gross profit margin, important losses of income can arise from failure to obtain the proper mixture of product sales. The way in which this may be measured is illustrated by the following figures:

	Forecast Budget	*Control Budget*	*Per Books*	*Variances*		
				Sales Volume	*Sales Mix*	*Sales Price*
Sales	$100,000	$95,000	$92,500	$-5,000		-$2,500
Standard Cost of Sales	55,000	57,000	57,000	+ 2,750	-$4,750	
Standard Gross Profit	$ 45,000	$38,000	$35,500	-$2,250	-$4,750	$,-2,500

The forecast budget is based on a mixture of products which will yield a standard gross profit of 45 per cent on standard selling prices. However, the actual sales have a standard cost of $57,000 with a standard gross profit yield of $38,000, or 40 per cent of standard selling price, because of a higher proportion of sales of products with low gross margins. If the forecast mixture of sales had been actually obtained, the standard cost would have been 55 per cent of $95,000 or $52,250. The difference between this figure and the standard cost of the goods actually sold ($57,000), or $4,750, represents the loss due to the higher proportion of low-margin goods in the actual sales.

In computing the gross profit lost as a result of a sales volume $5,000 less than forecast, it is necessary to take into consideration this mixture variance, and to compare the forecast standard cost of sales with the standard cost of sales for the control budget which would have existed if the forecast rate of gross profit had been obtained, i.e., if there had been no mixture variance. Comparison of the forecast cost of sales of $55,000 with the standard cost which would have resulted if the forecast margin had been obtained ($52,250) gives a cost of +$2,750 as an offset against the

sales revenue loss from the decreased sales volume. The sales price variance is developed as before by comparing the actual sales at standard prices with the actual sales at attained prices as reported by the books.

This type of analysis, when combined with forecasts tied to business indices as discussed above, enables the accountant to provide management with information on sales results comparable with the information usually provided on production results. It permits a separate reporting of the variations in sales results that are due to the following:

The influence of general business on the volume of sales.

The accomplishments of the sales department in obtaining the forecast sales volume in the light of general business conditions.

The accomplishment of the sales department in obtaining the forecast mixture of sales of high and low gross profit items.

The accomplishment of the sales department in obtaining the sales prices which management has set as standard.

This is very useful managerial information. And it is the function and privilege of accounting and budgeting to furnish carefully derived, useful information.

COST PROBLEMS ENCOUNTERED IN CPA EXAMINATIONS

Howard F. Greene

From June, 1917 to November, 1945, in semiannual examinations, the American Institute of Accountants submitted to candidates a total of 724 problems and questions on Accounting Theory and Practice. These examinations have been adopted by the examining boards of most states and territories as their official CPA examinations. For instance, the Institute reported that in May, 1945, a total of 1,557 candidates took the uniform examination in forty-two states, the District of Columbia, and four territories. Since Massachusetts and Rhode Island hold examinations only in November, apparently only four states used independent examinations in May, 1945.

It is of interest to cost accountants to note that of the 724 problems and questions presented by the Institute 88, or 12.15 per cent of the total, were based on cost accounting or the related subject of inventory valuations, 34 of the 88 being related to inventories. This represents the greatest number of problems based on any one subject. Consolidated financial statements provided the basis for 55 problems and questions, Accounting for Mergers and Reorganizations was the subject of 32, and 32 more were concerned with Municipal Accounting.

By comparison with this twenty-nine year period, statistics for the ten years ended November, 1945, show that 40 out of a total of 238 problems, or 16.81 per cent, were based on cost accounting, including 15 relative to inventory valuation. The obvious inference is that the American Institute Board of Examiners considers the subject of cost accounting to be of increasing importance.

Cost problems encountered in American Institute examinations cover both job order and process cost systems. Situations in which joint products and by-products are produced are also presented, as well as estimated and standard cost systems.

Under so-called "job order" cost systems, the individual job or customer's order is used as the unit for accumulating

cost data. Direct materials are usually charged against such job orders on the basis of information accumulated from material requisitions prepared at the time the materials are withdrawn from the storeroom. Direct labor is apportioned to jobs according to time tickets prepared by the worker or a timekeeper. Apportionment of manufacturing expenses is the major problem encountered in job-order cost problems. The bases for such apportionment include (a) direct material cost, (b) direct material weight, (c) direct labor cost, (d) direct labor hours, (e) prime cost and (f) machine rate.

Determination of direct material "costs" may be made under several methods: (1) the first-in, first-out, or "fifo," (2) the last-in, first-out, or "lifo," (3) average cost, (4) sliding or moving average, (5) base-stock, (6) specific cost of identified unit. A question on these methods was given in the November, 1940, Institute examination, Part I, Problem 1:

> Of each of the following inventory methods (a) describe the principal features; (b) give at least one situation, business or industry in which it is used to advantage and considered good accounting practice, and in each case give the reason for its selection; also (c) state whether it is permissible for federal income tax purposes:
>
> Retail method
>
> Using a constant price for so-called normal quantity of materials or goods in stock (base-stock method)
>
> Last-in, first-out
>
> First-in, first-out
>
> Average cost
>
> Deducting from the inventory a reserve for price changes or an estimated depreciation in the value thereof.

This problem, or parts thereof, was repeated in November, 1941, Part I, Problem 5; May, 1943, Theory Question 8; and May, 1945, Theory Question 4.

Determination of direct labor costs from time tickets is a mechanical procedure and no CPA problems have been based thereon. One problem on the proper treatment of overtime labor premiums in cost-finding was given in the May, 1945, examination, Theory Question 9: "Discuss briefly the relative merits of charging overtime premiums to individual production orders or including them in the departmental overhead."

Problem 2, Part II of the June, 1917, examination asked, "Explain in full the theoretical difficulties in regard to each of three commonly used methods of distributing overhead burden in cost accounting." In May, 1918, Part II, Problem 5 required the candidate to "Name two methods of distributing the overhead or indirect expense of a factory so as equitably to transfer such expense to the cost of the different articles manufactured. What advantage has either method over the other?" May, 1920, Part II, Problem 4 says "Define the following and give a list of expenses which would properly come under each heading: (a) Shop overhead; (b) General overhead. Discuss various methods of distributing such expenses." In May, 1928, Part I, Problem 1 involves a situation in which burden is distributed by using the "predetermined-machine-hour rate method." Note that use of a "predetermined" rate is customary in cost accounting since it usually is not practical to wait for an "actual" rate to be known at the end of the accounting period before commencing overhead apportionment for the period. In November, 1940, Part II, Problem 5, the candidate is told that "It has been decided to include burden in the production cost at departmental normal rates, and you are called in to calculate these rates from the following normal annual operating data prepared by the company. . . . State the basis or bases on which the burden should be applied to the direct manufacturing costs."

Manufacturing expenses may be generally segregated into two classes, (a) fixed, which tend to remain constant in

amount regardless of variations in volume of goods produced, and (b) variable, which tend to vary in amount in ratio with fluctuations in production volume. In November, 1944, Theory Question 6 states: "In accounting for manufacturing costs, a company maintains a record of fixed and variable overhead expenses as well as a record of units produced. Distinguish between fixed and variable expenses by appropriate illustration, and explain the reason for maintaining a segregation of such expenses."

In a period of abnormal or subnormal production, fixed overhead should be distributed to production at normal period rates. This principle is involved in May, 1940, Part I, Problem 1, which states: "Due to an extended slow-down strike in 1939 much less coal was mined in that year than during the three preceding years in which production was considered normal. . . . Is the pricing of the closing inventory at December 31, 1939, at $19.88 per ton acceptable for financial statement purposes? . . . Discuss briefly the classifying of costs into fixed and variable divisions."

When overhead is distributed on the basis of predetermined rates, the difference between the amount so distributed and the actual manufacturing expenses represents over-applied or under-applied overhead. Such overhead variation may be treated as follows:

(a) carried directly to profit and loss as (1) an adjustment of cost of goods sold during the current period or (2) a nonoperating adjustment
(b) deferred to a future cost period (usually done during intermediate periods within a year to level off seasonal variations)
(c) apportioned between cost of goods sold during the current period and inventories of goods in process and finished goods at end of the period (1) by means of a supplemental rate distribution to each job worked on during the period (not usually done, because of the volume of work involved and questionable value of results) or (2) by an approximation based on total costs as previously determined.

In November, 1930, Part I, Problem 3, the unofficial solution published by the American Institute refers only to a method like the last item above, saying, "a simple approximation somewhat as follows, may be used to distribute the overapplied factory overhead."

It should be noted that an over-application of burden produces overstated ending inventories, whereas an under-application of overhead results in a *conservative* statement of inventories. The necessity for adjusting inventory values is much greater, then, in the first case than in the latter. In November, 1932, Part I, Problem 1, the unofficial solution gives the following analysis:

> The candidate, after studying the problem and noting the variations between actual and applied overhead, and the apparently arbitrary rates of 100 per cent of direct labor used in each department, may be sorely tempted to redistribute the overhead in an attempt to arrive at actual cost. Before making a redistribution, however, the candidate should consider two factors: (1) the possibility of an accurate distribution, and (2) the desirability of a distribution. . . . Thus a strong argument is presented against using the actual costs, even with no consideration of the possibility that an overhead rate of 100 per cent will produce a normal cost, a cost which averages out the seasonal fluctuations and is more satisfactory than the actual cost.

November, 1932, Part I, Problem 2 also covers the most complicated situation involving distribution and redistribution of costs of service departments against production presented by any Institute problem. Journal entries and ledger accounts are given covering charges against (a) power house, (b) pattern shop, (c) foundry

and (d) machine shop. Power house costs have been redistributed to the other three service departments and to general office. Pattern shop overhead has been redistributed to work-in-progress and general plant expense. Final distribution of overhead to jobs in process has been made from the pattern shop, the machine shop, the foundry, and general plant expense. The major principle involved in the problem is the reversal of these distributions and redistributions so that the total amount of each element of cost will be available for the statement requested by the president of the company, who has "asked that figures be submitted showing inventories at the beginning, purchases, payrolls, etc." —presumably meaning figures for use in a Statement of Cost of Goods Manufactured and Sold.

Process cost systems have been used as the basis for a majority of the Institute examination cost problems. If production consists of certain standardized products manufactured by means of various uniform processes, the individual process for a given period is generally used as the unit for accumulating costs. Unit cost of production is calculated by dividing total cost applied to the process, by total units produced by the process. The practical application of this principle becomes complicated by the necessity for considering partially completed units (goods in process). Whereas direct materials may be 100 per cent applied at beginning of the process, conversion costs (labor and overhead) are applied gradually throughout the process. Consequently, in determining total periodic production, it is customary in cost accounting to convert the units in process to a "fully completed equivalent" for each element of cost by multiplying the units in process by the estimated percentage of completion. For instance, 1,000 units that are 50 per cent completed require the same conversion cost as 500 units that are 100 per cent completed.

If the percentage of completion of goods in process is not given, the best assumption is that 100 per cent of materials and 50 per cent of labor and overhead have been applied, on the theory that all materials were used at the start of the process and that conversion costs were applied uniformly throughout the process with some units just started and some practically completed, the entire number in process thus averaging half-converted.

November, 1945, Part II, Problem 2 presents a process cost situation. "For purposes of this statement inventories are to be stated at cost as follows: materials, according to the first-in, first-out method of accounting; direct labor, at an average rate determined ***by correlating total direct labor cost with effective production during the period;*** and manufacturing overhead, at an applied rate of 120 per cent of the direct labor rate" (Italics added). Work in process is stated to be 80 per cent complete.

November, 1944, Part II, Problem 2, requires a statement of undelivered inventories at cost in connection with a terminated contract, work-in-process inventories being given as follows:

	January 1, 1944	*March 31, 1944*
Dept. No. 20	800 units, estimated to be 40 per cent complete	500 units, 40 per cent complete
Dept. No. 30	600 units, estimated to be 30 per cent complete	800 units, 70 per cent complete

One of the best problems to illustrate the fully-completed-equivalent principle is in May, 1938, Part I, Problem 1. Inventories in process are stated to include

Direct material content (100 per cent complete)

Direct labor content (average 50 per cent complete)

Indirect cost (at 50 per cent of direct labor costs)

An alternative solution is required as-

suming that indirect costs were actually 60 per cent of direct labor costs.

Another excellent process cost problem is in May, 1925, Part II, Problem 1, in which a different stage of completion is given for each of four departments. This problem also presents the situation in which a shrinkage of units occurs in process. Since the costs do not shrink correspondingly, it becomes necessary to dispose of the costs applicable to the lost units. Two methods are commonly used.

(1) Apportion the lost-unit cost to goods in process and to goods finished, by pricing the ending inventories at values determined by dividing total cost by the reduced number of units.

(2) Transfer the lost-unit cost to the next process by valuing the ending inventories on the basis of prices determined by dividing total cost by the number of units placed in process before shrinkage.

The first method is used in the unofficial solution to May, 1925, Part II, Problem 1.

Other cost problems involving treatment of lost units include November, 1922, Part II, Problem 1; November, 1937, Part II, Problem 1; and May, 1945, Part II, Problem 2. In these problems, however, inventories are not a factor and the lost-unit cost consequently applies entirely to goods finished.

A situation is sometimes encountered in which more than one product results from a common manufacturing process. If such products are relatively unimportant, they are treated as by-products and no attempt is made to apportion common costs thereto. The excess of recovery from the by-product over any costs directly chargeable thereto is usually credited to reduce the cost of the other "principal" products. Recovery from the by-product is calculated as proceeds realized from the quantity produced and sold during the period plus market value of the quantity produced during the period but not sold. The result is that by-product inventories are priced on the books and financial statements at market value.

When different products manufactured by a common process are relatively important, they are considered to be "joint" products, and costs are arbitrarily apportioned in such a way that the gross profit on all such products will show the same ratio to sales values. Since the cost to be apportioned is cost of the number of units manufactured, and the uniform ratio to be attained is that of cost to selling price, it is necessary to ascertain the sales value of the number of units of each product manufactured. The ratio of total cost to sales value of total units manufactured can then be applied to (1) total sales value of a specific product manufactured to ascertain total cost to be apportioned to that product, or (2) unit sale price of the specific product to find unit cost of that product.

In calculating sales value of total units manufactured, it is necessary to use (a) sales proceeds of units manufactured and sold, (b) current market price of units manufactured but not sold (inventory at end).

The best problem ever given in an Institute examination to illustrate the comparison of the joint-product and by-product principles is in May, 1924, Part I, Problem 1. Here the Copper Metal Mining Co. produces copper, silver, and gold, and the candidate is required to "determine the profit or loss in the two ways named below, before depletion, for the year 1923 and the value of the inventory, at cost, as at December 31, 1923, each metal being valued separately, on the bases (1) that copper is the principal metal and silver and gold by-products and (2) that each metal bears its own share of the costs."

Several other problems involve the joint-product principle.

(1) November, 1927, Part II, Problem 2, in which "The Golden Fleece Knitting Mills, engaged in the manufacture of woolen sweaters of various kinds," finds that "owing to sundry imperfections necessarily and continually arising in the manufacture, some of the finished articles have to be classed as 'seconds' and are sold at 25 per cent less than the selling price of 'firsts'."

(2) May, 1933, Part I, Problem 3, in which six sizes of plate glass with sales prices ranging from 28 cents to 5 cents per square foot are manufactured at one time.

(3) November, 1938, Part I, Problem 1, in which six grades of lumber with selling prices ranging from $35 to $10 per M feet are produced by common logging operations.

(4) May, 1941, Part I, Problem 2, in which the Zinc Mining and Milling Company (A) mines zinc and lead ores, and (B) mills zinc concentrates (for itself; for others) and lead concentrates (for itself; for others). The company receives its compensation for milling ores for other people in the form of a share of the concentrates produced. Milling costs are apportioned between zinc and lead on the joint-product basis. Separate apportionment of the cost of its own concentrates and the cost of concentrates received from others is necessary since the one cost includes mining and milling, whereas the other includes only cost of the milling operation.

Other problems involve the by-product principle of costing.

(1) November, 1922, Part II, Problem 1 states: "In Department B there is a yield of only 75 per cent of Saltero from the tonnage of the ingredients mixed; the other 25 per cent is treated in department E and one-half of this 25 per cent is recovered as the by-product, Scrapto, the other half being entirely waste."

(2) May, 1925, Part II, Problem 1 states: "At the completion of the process in this department, by-product 'Y' (equal to ten per cent of the materials processed) is drawn off and shipped direct to the purchasing company as explained above. . . . In Department C, ingredients to the amount of ten per cent of the total mix are separated and transferred to Department D, where, after further refinements involving a ten per cent loss, the by-product 'Z' is recovered."

(3) November, 1928, Part I, Problem 1, in which a waste recovery of $18,694 is indicated and a shrinkage in volume of materials processed is obviously related thereto.

(4) May, 1944, Theory Question 10 requests the candidate "to explain various methods of accounting for by-products and the circumstances influencing the selection of each method."

Under standard or estimated cost systems all three elements of cost (direct material, direct labor, and overhead) are charged at predetermined rates. Subsequently the variances between such standard and the actual costs are analyzed to determine their cause. Several CPA problems are based on standard or estimated cost systems.

(1) November, 1918, Part I, Problem 2, which states that "The following problem is based upon the estimate cost system." Cost data are given, and the candidate is required to "Prepare balance sheet and profit-and-loss account for the month. Add or deduct from cost of sales, when preparing profit-and-loss account, the unabsorbed labor, expenses, etc."

(2) November, 1927, Part II, Problem 2, in which "the mill operates under a system of 'standard costs' using a basic price for wool yarn of $2 per pound. The standard costs for labor, overhead, etc., vary according to the article manufactured."

(3) May, 1940, Part II, Problem 2, in

which the S.S. Manufacturing Company "decided to establish standard costs." At the end of a thirty-day operating period the factory cost accountant confessed that he and the factory foreman had contrived to produce for their personal benefit 500 lawn mowers above the recorded production. The candidate is required to "restate the actual and standard production costs for the thirty-day operating period and show the estimated loss by theft of the 500 lawn mowers."

(4) November, 1941, Part II, Problem 4 asks the candidate to "List five items entering into the cost of a manufactured product, the treatment of which in an 'actual' cost system might differ in a 'standard' method of determining costs and briefly describe how the amounts by which the actual costs vary from the standard are treated."

(5) May, 1944, Part II, Problem, 2 in which "The management desires to check manufacturing cost estimates against corresponding actual costs through the factory accounting records, and decides to make use of procedures followed under estimated cost systems in which estimated and actual costs are reflected in opposition in cost accounts and variations are developed thereby."

The current trend toward apportionment of distribution costs to sales or kinds of products sold is illustrated by two recent problems. In November, 1941, Part I, Problem 3, the candidate must "Prepare a schedule showing sales, costs, and operating net income for each line of goods distributed by the Argo Grocery Company." Also, in November, 1945, Part I, Problem 3, "The Johnson Meat Packing Company desires to study its distribution costs (selling, administrative and general expenses) which in the aggregate constitute 65 per cent of the total cost of doing business. From the information following, prepare an exhibit showing the allocation of total distribution cost per cwt. of meat products for each size-class of order (expressed in pounds per order). Carry out unit costs to hundredths of a cent."

It can be seen from this survey that the cost problems presented in the American Institute examinations involve questions of policy and procedure as well as cost computations and journalization. Of necessity the questions do not cover many of the routine operations performed in the setting of standards, the recording of costs, and the preparation of cost reports, since such operations are not generally provocative of searching questions. As has been indicated, the number of cost problems in the examinations has increased proportionately over the years, and it may also be noted that a majority of them have represented problems that were currently of major concern to industrial accountants.

CREDIT, BILLS, AND BOOKKEEPING IN A SIMPLE ECONOMY

W. T. Baxter

"From the point of view of the methods of exchange, there were three main stages of economic development: the prehistorical or early medieval stage of natural economy, where goods were exchanged against other goods; the later medieval stage of 'cash' (money) economy, where goods were bought for ready money; and the modern stage of credit economy, where commercial exchange was based on credit." Thus Professor Postan summarizes the views of

nineteenth-century writers on the history of exchange.[1] He goes on to explain that these writers relied on abstract deduction when there were gaps in their knowledge of business history; and further, that their minds had been newly quickened by the doctrine of evolution. They not unnaturally reasoned that, if credit has now evolved to a high peak of importance, then credit was probably less and less significant at each earlier stage. To quote one such scholar: "It may even be doubted whether, in medieval trade, credit operations can be spoken of at all. Early exchange is based on ready payment. Nothing is given except where a tendered equivalent can be directly received." If loans were ever made, they were for consumption, not trade.[2]

Professor Postan goes on to shatter these deductions. Citing a mass of medieval debtors' obligations, he proves that credit was *not* a negligible force in the Middle Ages, but was indeed the essence of many bargains.

If credit has played its important rôle for so long, then surely the history of bookkeeping should supply further evidence on the point. Credit without written reckoning is almost impossible; the first and most fundamental reason for keeping accounts is to aid in remembering what we have trusted to our debtors.

Early bookkeeping records fall into two groups, namely, the accounts themselves, and textbooks on accounting. A few sets of accounts date back at least to the close of the Middle Ages. But the bulk of the available evidence (as well as the textbooks) is several centuries junior to these precocious survivors. Does such comparatively modern material shed any light on the issue?

My own experience has been chiefly with the accounts of American merchants of the period 1710–75. Some of the ledgers, journals, and statements of Thomas Hancock, his nephew John, his father-in-law Daniel Henchman, and their correspondents, have been preserved, doubtless because of John Hancock's prestige as one of the founders of the United States. Relatively youthful though these records are, they offer us a wealth of clues regarding trade practices in a primitive society. And, when we recall what sort of conditions the colonial traders had to work under, it seems fairly reasonable to suppose that their procedure may have been not unlike that of their medieval forebears. Their communications were still dead slow, their commerce was a mere trickle in volume, mass manufacture was unknown to them, and they had not yet set up transfer banks.[3] Their coinage was in great disorder, and presents a clear analogy with the money used by medieval traders.[4]

CONDITIONS IN COLONIAL NEW ENGLAND

The men who wrote the Hancock MSS all lived in Boston. And it so happens that eighteenth-century New England is a particularly good field for research into primitive conditions, because its money was much worse than that of many other places.[5] A bad monetary system was still no unusual thing—even England did not put her coinage onto a moderately sound

[1] M. Postan: "Credit in Medieval Trade," *Economic History Review*, I, 1927–28, p. 235. N. S. B. Gras has also summarized this interpretation of economic history, and pointed out its dubious features, in "Stages in Economic History," *Journal of Economic and Business History*, II (1930), p. 395.

[2] Karl Bücher: *Economic Evolution*, translated by Wickett (1901), p. 128 *et seq.*

[3] I have described these conditions fully in *The House of Hancock* (Cambridge, 1945), XVI. Chapter II details the accounting evidence, which is mostly housed in Harvard Business School, and from which I obtained all my following quotations unless the contrary is stated.

[4] A. Evans, "Some Coinage Systems of the Fourteenth Century," *Journal of Economic and Business History*, III, p. 481; A. P. Usher, *Early History of Deposit Banking in Mediterranean Europe* (Boston, 1943), p. 193.

[5] C. P. Nettels: *Money Supply in the American Colonies* (Madison, 1934), p. 163.

basis until 1696. But the plight of the New England colonies was exceptional. Nominally, their money consisted of pounds, shillings, and pence, each of these units being (in Massachusetts) worth about three-quarters of its British namesake. But I doubt very much whether the Hancocks ever saw any of these coins, which seem to have disappeared about 1700. For hard cash, the New Englanders relied on dollars and other foreign coins won in their West Indian shipping ventures.[6] If we turn to one of Henchman's accounts with a Pennsylvanian firm that had sold him flour, we find that he sent back this medley of coins in payment:

johannes (i.e. Portuguese gold piece)
moidores (i.e. Portuguese gold piece)
guineas (i.e. English gold piece)
French guineas
pistoles (French or Spanish gold coins)
doubloons (two pistoles)
"checkeens" (i.e. sequins, Italian gold coins)

Such moneys were valued by both giver and taker in the monetary units of their respective provinces before being entered in their accounts. In other words the local pounds shillings, and pence were still used as units of *value*, even when they were not the units of *exchange*.

This was by no means the end of the story. Perhaps one coin in a hundred was worth its face value. Most had been so sadly clipped and sweated that they would be taken only at a discount. "These guineas" writes Thomas Hancock "are very short of Weight and to pass them here would be a great Loss as they must weigh here 5 dwt. 9 grs." So householders kept scales for testing the coins that came their way. Journal entries were apt to treat coins like goods to be dealt in by weight, e.g., one entry tells of a debtor's payment in silver money "which I sold to —— 4 oz. 17 dwt. 13 gr. @ 12/-per oz."

But even these battered foreign coins were somewhat hard to get. The reason for the shortage is probably as follows. Although New England was a hungry buyer of British manufactures she could in return grow little that was pleasing to the mother-country. Consequently her merchants paid for part of their supplies by exporting all forms of coins and specie. A coin from the Indies might circulate for only a brief period before being shipped to London. As late as 1750 a visitor to Boston wrote "This is the first time . . . that Supplies of Silver Coin could be had from Boston, 'tis quite new to them—merchants that could supply 50,000 £ Value in stores cannot raise 5,000 £ St. in Cash."[7]

To fill this gap the New Englanders took what was then the bold and original step of making paper money (as early as 1690). And not only did each of the various provinces print official notes but groups of private individuals formed themselves into "banks" that experimented with large issues on the basis of silver, land, or merely personal credit. Soon both types of notes began to depreciate "owing to the idle suspicions of the ignorant." There followed a long and gentle inflation which rose sharply to a peak during the war of 1744–8. Conservatives sometimes accepted the private notes only at a discount which varied according to the issuer's status and they flatly declined to take the notes of the more exuberant bodies. Even the official notes were looked on with some misgiving; and as they had almost the status of legal tender they presumably helped to drive hard money from circulation.[8]

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[6] For a description of the currency, see W. B. Weeden, *Economic and Social History of New England* (Boston, 1890), and J. M. Davis, *Currency and Banking in the Province of Massachusetts Bay* (New York, 1901), and articles in *Proceedings of the American Antiquarian Society* (February, 1898), and *New England Historic Genealogical Society Register*, LVII, p. 280.

[7] See the Canadian Archives' *Documents Relating to Currency, Exchange, and Finance in Nova Scotia* (Ottawa, 1933), p. 296.

[8] Davis, *op. cit.*, pp. 101–8.

The Hancock records leave little doubt about the scarcity of all forms of money, even in years when metal was being eked out by a considerable flow of paper. The shortage heightens the resemblance between Colonial conditions and those obtaining in medieval Europe. In both cases, it is worth noting, the standard of value and reckoning was often not the staple standard of exchange. This has led certain writers on medieval currency to talk of an "imaginary money of account." The phrase is apparently justified if it means that some of the units were not represented by coins, e.g., the "shilling" might not exist (and might indeed never have existed) but simply was a handy name for "a dozen pennies." Further, changes in the relative values of gold, silver, and copper might result, e.g., in the penny's (actual coin) ceasing to be the same thing as the penny (unit of account); the former was then rated at some such ungainly fraction as 20/29 of the latter. So the link between the two brands of money might well be slender. But I find great difficulty in conceiving of genuinely imaginary money. Surely price units must always have been anchored to real money or commodities by some rating system. even if it was unofficial and based merely on the common consent of the market.[9] In the case of New England, prices and therefore money of account would seem to have been tied to the notes, though the links in the chain were elastic. Had money not been based on something less airy and illimitable than mental concepts the temptation to offer more of such cheap stuff would surely have been irresistible, and inflation swift.

In New England, the disappearance or scarcity of money did not result in a correspondingly low price level. True, any withdrawal of the official note issues produced a noisy outcry, checked trade somewhat and caused a downward pressure on prices. But the drop was never so spectacular as might have been expected; and there was no bottomless depression. Instead of fettering themselves to the ordinary forms of money, the New Englanders turned to other and older means of exchange. The Hancock MSS show that trade was largely based on commodity money and barter. The accounts are richly seasoned with references to payment in grain, in rum, and in potash, etc. Many a debt is stated to be "received in molasses," or "settled this day in cordage," or "paid in pork."

This is not to say that commodity-money ranked on the same plane of acceptability as cash. Ordering 30 barrels of pork, a Halifax trader writes: "You were so kind to tell me when you found the difficulty of procuring Cash that you would let me have more pork should the people here be inclin'd to take it on Acco[t] of payment."[10] As late as 1783, a Salem debtor is commanded to pay "in as much Cash as you can Obtain—and perhaps Some W. India Goods if the Price Suits." Goods, it should be noted, were never thought of as units of value. Like strange coins, they were weighed and valued in terms of Massachusetts money; thus a journal entry runs:

James Barrick Dr to Merchandise
Ballance due to him paid in Hemp this day, 130 cwt. 0.8 lbs. at 64 £416. 9. 2½

The goods were presumably appraised at the current market prices, or at the official values proclaimed by the legislature when taxes were collected in kind. This meant that a merchant might in theory have to "sell" commodity money to his creditors without making a profit; and the books contain traces of many such non-profit transfers. But doubtless the merchant would tend to glean some revenue. Barter lends itself to the exploitation of creditors.

[9] Usher, *op. cit.*, p. 217.

[10] Boston Public Library, Ch.M. 3.5, II, p. 221, July 30, 1767.

"He that bartereth hurteth hymself, for commonly the one partie ether for lacke of makyng his reconyng or for not hauyng knowledge of the wares or prises of the same, or dooth not consider the tyme whiche passeth and commeth, bee it long or short, (for as the prouerbe is: The Wolues eate not the daies, for thei passe bothe slepyng and wakyng) ie euer driuen to the worsse."[11] Abuses were particularly rife when servants were paid in kind. A New England pamphleteer explains how a carpenter loses by being paid his wages in depreciating notes, "and even this is further reduced, by obliging him to take one half in shop goods at 25 per cent or more advance above the money price."[12]

CREDIT IN A BARTER SYSTEM

The Hancock records suggest that credit was of greater rather than less importance under these conditions. Prompt payment in pigs, for instance, would often have been highly inconvenient alike to giver and taker. Commodity money was probably thought of more as "commodity" than "money," i.e., its movement was bound up with considerations of harvesting, consumption, or resale. Delays in payment were therefore inevitable. Further, as the units were not always homogeneous or readily divisible (e.g., the hog) exact settlement was hard, and a balance of debt was often left over. Trade would scarcely have been possible without abundant credit.

Under such circumstances, bookkeeping was indispensable. Indeed, I feel that the system might well be named "bookkeeping barter." Account after account shows how, for instance, country shopkeepers would take manufactures from their Boston wholesaler, and would then pay by slow and painful instalments—perhaps first some butter, then a bill of exchange, next a barrel of pickled beef, and so on. Between any two traders, goods normally flowed *both* ways; and the balance of debt might swing from side to side as the years went by. Per-contra payment was thus the rule, and any trim division of personal accounts into a debtors' and a creditors' ledger would have been out of the question; also, dealings were far too involved to permit of their grouping in specialized day books.

A certain amount of two-way trade would be natural enough in a small community; something similar is still found in rural South Africa, particularly in the trade of storekeepers in the native territories. But its volume in the Hancocks' time (and especially in the twenties, when monetary difficulties were unusually severe) can hardly be explained except by a great need for bookkeeping barter. Every Tom, Dick, and Harry was a credit manipulator. Thus Henchman kept a ledger account for his barber, who took corn as payment. The painter who decorated his house sent in an account-current, which shows that payment was extracted in driblets of cash, corn, and books. Henchman's ledger also shows his brother's being charged with board (in an account that runs on for eleven years, and is credited with various items such as oranges and oysters); even "Jean Whippo, our maid" has an account that is credited with her wages (at £5 per annum) and is debited with "1 suit of cloaths . . . £5," etc. The life and hopes of countless persons must have been sternly ruled by a ledger account.

Plainly, this type of trade does not fit into any neat historical analysis of barter, money, and credit stages. All three types of exchange exist side by side, and may indeed be met with in a single contract.

[11] Jan Impyn, *New Instruction* (1547), reprinted in *Economisch-Historisch Jaarboek*, 1934, p. 40.
[12] Douglas, quoted by Davis, *op. cit.*, p. 376.

For instance, credit may be allowed to a debtor who promises to pay later with one-third money and two-thirds goods (which are always valued and recorded in terms of money).

THE DEVELOPMENT OF CREDIT TRANSFERS

Crude barter has two glaring defects: (1) if A and B are to exchange goods, their wants must be simultaneous; and (2) each must want what the other has.

Bookkeeping and credit enabled the New Englanders to surmount the first defect. To some extent, they contrived to overcome the second also. This was done by *triangular* barter. A sells goods to B; if B does not have what A wants, but is owed a debt by C, he may send A to look for acceptable things in C's store; a purchase there will mean that C has paid B, and B has paid A, although the goods in fact move only across the base of this triangle of traders. Such three-sided settlements were common as witness waste-book entries such as the following, in which Hancock fills the rôle of B:

Brown and Son Dr to Joseph Rhodes
for 15 boxes Tin plates

Were similar transfers made in the Middle Ages? Common sense suggests that the New Englanders probably inherited their technique of settlement from an earlier generation. And we know at least that transfers of goods took place when the goods had been deposited in a warehouse. Before the Christian era, the Egyptians could transfer rights to grain stored in granaries (with the help of a document corresponding to a cheque);[13] and transfers of hemp were made in the government rope factory of Venice in the fifteenth century.[14] Here are exact analogies to certain warehouse dealings that are mentioned in the Hancock MSS. For instance, Hancock had to hand over gunpowder for safekeeping to the official powder house; his account with this institution shows that he would then give orders to third persons entitling them to withdraw barrels. Much the same sort of thing happened when he had sent molasses to a distillery to be made into rum.

But if C is a warehouseman or a similar agent, perhaps we should be wary about speaking of triangular settlement. C is not here a fully fledged third party, but merely B in thin disguise. The goods still belong to B; thus Hancock did not always keep a money account with C (the powder house) but merely a stores account in terms of barrels. Happily for our theory, however, such warehouse transactions make up only one in a hundred of his triangular settlements. C was far more often an independent trader.

EARLY BILLS OF EXCHANGE

Should it prove that triangular settlements in kind were common in the Middle Ages, they may well explain the birth and popularization of double entry. What is more, they may perhaps throw light on the origins of bills of exchange.

Medieval scholars have shown us that recognizable ancestors of our bills had appeared by the fourteenth century. The very first evidence, we are told, consists of references to "letters of payment" in correspondence (dated 1291) from a Florentine company to its branch or agent in London. The bulk of the early evidence suggests that bills were used chiefly in foreign exchange; that they were somewhat complex in nature, often involving four parties; and that they became usual

[13] W. L. Westermann, "Warehousing and Trapezite Banking in Antiquity," in *Journal of Economic and Business History*, 1931, p. 49; A. T. Olmstead, "Materials for Economic History of Ancient Near East," *ibid.*, 1930, p. 224.

[14] F. C. Lane, "Rope Factory and Hemp Trade of Venice," in the same *Journal*, 1932, p. 836.

in home trade only at a much later date (in England, the seventeenth century).[15] In the Hancocks' own times, Acts of Parliament and Lord Mansfield's judgments were still reducing the law governing bills to order.[16]

This history does not seem altogether complete or convincing. It can say little with assurance about the *birth* of bills. It cannot yet be supported with any of the actual documents, which naturally are extremely scarce; and, as resounding legal deeds and important foreign letters are far more likely to be preserved than homely trade papers, there must surely be some risk of giving too much weight to the former types of evidence. One is left wondering whether the bill's origins should not be sought in something more simple and informal than letters to a foreign agent, and whether these early foreign bills had not some domestic parallel. On the face of the matter, evolution from foreign exchange to local payment, from the elaborate to the easy, does not appear likely. To my mind, the Hancocks' triangular transactions (especially those in goods), and the papers by which such transfers were engineered, suggest that our history of bills is one-sided. And it must be remembered that the Hancocks' legacy of MSS includes many papers of a type so informal that they would normally have been destroyed.

Yet I scarcely need to emphasize that what follows is intended as nothing more than a tentative line of research for the medieval scholar. It would indeed be absurd if, in an article that starts by taking to task theorists who prefer doctrines of evolution to facts, I were to make the same blunder. In the field of biology, "evolution" is merely growth, not necessarily from inefficient to efficient, or from simple to complex; sometimes the growth may seem degeneration to us. The same may well hold of human institutions like exchange. At the beginning of the Middle Ages, the written, as contrasted with the verbal, contract was looked on with suspicion; so the first bills may well have been hedged around with formalities. Further, the medievalist can counter my suggestions by reminding me that the New Englanders had the very advanced English practices of the seventeenth century to build on; that foreign exchange loomed unnaturally large in the minds of the early merchants, because it was often a useful cloak for usury; and that the medieval merchant was at many points held back by conservatively minded jurists, whereas the new Colonies were relatively unhampered by legal aid. Let me describe the Hancock papers, and leave the reader to judge for himself.

The simplest group of "orders" to reach the Hancocks was part of their two-way flow of goods. A wants wares from B; instead of going for them himself, he sends a servant or agent. This was very usual in the case of a country customer, who would write to Hancock for goods, and add that these should be given to some carrier or to the captain of a coasting boat for delivery. Such transactions are no more than mail orders at a time when there was no parcel post. The Hancock MSS contain many examples; a slight variant, which I found on the other side of the Atlantic, may be seen in:

January the 25th 1763.

Loving Child,

please at your conveniency to allow to the poor wydow Bearer hereof and her Orphans one Bole of the Moulter of your Mill of Benbeculla, which Shall be Sustained at accounting with

[15] Usher, *op. cit.*, p. 73 *et seq.;* R. de Roover, "Early Accounting Problems of Foreign Exchange," Accounting Review, 1944, p. 381; W. S. Holdsworth, *History of English Law*, VIII (London, 1923), p. 113.

[16] R. D. Richards, *Early History of Banking* (London, 1924), pp. 46–9; C. H. S. Fifoot, *Lord Mansfield* (Oxford, 1936), p. 91.

Dear Sir
Your affectionate father
Ronald McDonald Clanronald Senior[17]

Often the third person was a partner, since a great deal of trade consisted of joint-adventures by casual and short-lived partnerships.

The next group of orders was part of the triangular trade. Here the third person is no mere agent. When A asks B for goods, B gives him a written order on C. C then makes an entry such as:

T. Atkins Dr to Merchandize
for his note paid John More in Pork and Flour 4. 12. 3.

B's entry will be like this:[18]

Andrew Symmes Dr to Capt John Matchett
for my order on him for 6 Bushells of Indian corn at 3/- —18.—

An example of the note is:

Boston Dec^r 30 1769
John Hancock Esq^r
Sir please to pay Mr. Joseph Moffat or order in goods One pound thirteen Shillings and 3d Lawful Money and charge your humble serv^t.
Thos Dawes

£1. 13. 3

A suitable receipt is often written on the back.

Great numbers of such notes have been bequeathed to us among the Hancock MSS. These survivors include forty-four from a single customer, for a period of only four months. Though there were many individual vagaries, most of the notes tend to use much the same word formula, and even to be on paper of a standard size and shape, resembling our cheques. These facts, and the use of phrases such as "on demand" and "or order," emphasize the likeness of the notes to bills of exchange. And perhaps it is worth recording that the "bank" and provincial monetary notes, on the other hand, leaned towards the bills payable in kind, for their wording mentioned a *weight* of metal.[19]

Another, perhaps smaller, group of papers consists of bills payable in money. A lot of these, particularly the more formal documents, were for foreign trade, thus supporting the views of the writers mentioned above. On the other hand, many of the papers used at home were the same in effect as bills, although the informality with which they were sometimes drafted may disguise this fact. For instance, an order to pay one-third goods and two-thirds money would not now be classed as a bill by a lawyer; yet the results are the same.

EVERY MERCHANT A BANKER

The essence of our triangular settlements among A, B, and C is that C gives something of value to A on behalf of B. That something, as we have seen, was usually goods; it would have been idle to draw on C for cash if cash was not to be had. In the typical triangular settlement of to-day, C has blossomed into a banker, and the something is usually a credit in his books that is transferred from B's account to A's; settlement is made by the magic of a cross-entry. The question naturally arises: could the New Englanders also make settlements aithout moving goods or cash.

[17] Clanronald MSS, Register House, Edinburgh.

[18] A doubtful example is:
Expence Dr to Joseph Scott
for my note payable to W^m Warllan.
This may either be "two-way"—i.e., Warllan is an agent, or Warllan has rendered some service and is rewarded with the note, without any account being opened for him.

[19] Davis, *op. cit.*, p. 158, reproduces a note: "This bill of twenty shillings, due to the possessor thereof, from the province of Massachusetts Bay, shall be equal to three ounces of coined silver, Troy weight, of sterling alloy, or gold coin, at the rate of four pounds eighteen shillings per ounce and shall be so accepted in all payments, and in the treasury. Boston 1741."

The answer is that they could and did. This is proved by their odd use of the word "discount." Discount's original meaning was "abatement" or "deduction," e.g., by way of a counter-claim against a sum due. (Discount on a bill was one special type of abatement: "interest discounted.") Instead of taking goods from C, A might build up a credit with him (or lower an existing liability). So a variant to the notes runs:

> Pay into (or Discount with)
> Mr. James Dennie, or Order,
> Twenty Pounds.

Such "checks" might be endorsed and circulate from hand to hand.[20] I am not sure whether any "usance" was normal; probably, as in the above example, the drawer did not bother to specify when the payment or cross-entry was to be made. My impression is that a month here or there meant nothing in that easy-going society. Nobody seems to have fussed about "discount" in our sense. Perhaps the exchange rates tendered for foreign bills took the time factor into account, though the risk factor loomed a great deal larger in the mind of the buyer, who was willing to pay substantially more for bills drawn by merchants with first-class reputations.

Like the orders payable in kind, the notes may well have had their genesis in very simple requests, with the third person acting merely as agent or messenger. One possibility is shown by this letter:

> Boston Jan^{y} 10, 1769.
>
> Sir,
>
> Please to pay my Wife Mary Anderson Five doll^{s} per Month on Acco^{t} Wages due to me on board the Schooner Lucy & charge the same to
>
> Your humble Serv^{t}
> Charles Anderson.

That the orders were widely understood is suggested by entries in Henchman's ledger for two carpenters, one his debtor and the other his creditor; he puts through "discount" entries to set off their balances. On occasion, a verbal order might be a good enough authority for such a cross-entry. Apparently anyone who kept a ledger might be called on to transfer credit; every bookkeeper thus performed one of the banker's functions, and clearance was not yet centralized.

Most merchants of standing probably performed several other of the banker's functions. In telling the story of the Hancocks, I have explained that any large firm of repute would naturally be called on to deal in bills, to finance military campaigns, to take charge of other people's funds, and to invest these in securities such as provincial loans or lottery tickets.[21] But much less important men also carried out many of the banker's tasks for their customers. Because there were no specialized bankers and little cash, trade and finance were perforce tightly intertwined. Henchman was mainly a bookseller, but an account for one of his country correspondents tells this tale. In four months, the correspondent makes eleven deposits (eight in the form of cash delivered by captains, or others, and three by notes). On the other side are shown a series of payments at the correspondent's order (e.g., for pasturing a horse); finally about £500 of cash is withdrawn, together with £950 made up of a wedge of gold and 25 double doubloons.

INTERNATIONAL CREDIT AND EXCHANGE

Importing provides another instance of the union between trade and banking. The

[20] Henchman's journal contains:
9 Sept 1732 Ebenezer Gennings Cr
By a note to disc^{t} with Mr. Beecham from Apthorp £20
David Mason Dr
To Mr. Apthorp's Note to pay Beecham endorsed to me for £20

[21] *The House of Hancock* (Boston, 1945), p. 204.

main financial burden of Anglo-American trade was shouldered by British exporting houses, which might give the Boston importer a year's credit, free of interest, and extend the loan for a further period at 5 per cent. The Boston merchant distributed the goods to country shopkeepers and chapmen, noting in his journal "to pay in 4 [or 8, or 12] months." If the customer's account was not squared after a long time, the balance might be converted into a bond carrying 6 per cent interest. When the account was next reviewed, this bond might be replaced by a fresh one (including compound interest).[22] Like most other commercial documents, the bonds were informal. They might contain a clause stating that the debt was to be doubled if not paid when due. Probably they were not normally mortgages over land, etc., though on occasion even a share in a ship was conveyed as security; in some instances, a church pew was mortgaged.[23]

It will be seen that the Boston merchant was doing much work that has since been delegated to bankers, shippers, and other agents. He was the central link in a chain of credit that stretched from London to the frontier. A loan seems a great favor before we have obtained it; after, we are apt to regard it as an injury. The heavy load of debt of merchants to Britain was probably a major cause of the Revolution.

An account-current between a Boston merchant and his London creditor would provide an object lesson to those who believe in tariffs or exclusive trade agreements between two countries. It shows us the stark realities of international trade, unobscured by money or bankers. The British exporter had to be an importer too, or go without payment. As in home dealings, the basis of trade was bookkeeping barter, often with triangular or more complex geometrical embellishments. If the Boston merchant had nothing that his London suppliers wanted, he would send provisions to Newfoundland, the West Indies, or Europe, and after one or more exchanges would get goods (or coins, or bills) that were acceptable in London.

Bookkeeping barter was by no means the only feature that was common to both local and international trade. Indeed, the New Englanders could probably see little distinction between the two trades. Foreign coins were everyday fare in Boston, and dealings with the next-door province involved currency exchange. Country trade must have shaded smoothly into interprovincial, interregional, and international trade.

As we have seen, country customers were forced by bad communications to appoint a Boston supplier as their general agent and banker. In overseas dealings, this dependence was the more complete; even the British government had to rely abjectly on Hancock for many supplies of credit, coin, and victuals, and for innumerable small services. Foreign exchange was not confined to specialists. Anybody might dabble in it; illiterate fishermen on the Newfoundland Banks provided Boston with many sterling instruments drawn on their Devonshire homeland. A merchant was always willing to deal in sterling bills on Boston 'Change, in general as a buyer,

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22 Thus on 22 June 1767, the journal shows a man being charged with:

Interest on his book debt after one year's credit on goods sold him	£ 4.11.9
Bond dated 27 September 1764 now given up	421. 8.6
Interest on this bond, 2 years, 8 months, 24 days	69. 2.2

After giving credit for some pork, a new bond was issued for the balance.

23 Hancock wrote this letter to three men:

"The Pew [of the] late Capt John Bulkley in the meeting house whereof the Re^d^ Mr Sam^l^ Cooper is minister Being mortgaged to me the subscriber in 1754 which I have taken Possession of.

I am to Desire the fav^r^ of you Gent^n^ to apprize the same that I may give the Estate Credit for it. Note there is an Incombrence of Two Grand Children of Mr. Bulkleys sitting in s^d^ Pew which I can't well Refuse."

but occasionally as a seller if he had somehow managed to build up credits abroad (e.g., by a lucky sale of whale oil). It is hardly surprising that bills, even those on the British Treasury,[24] were by no means certain to be honored; each depended on a circle of transactions, and a ship might be lost, or another bill might not be due, or a clerk might make an error in posting. A creditor was apt to get his dues only after exasperating delays, bickerings, and rebates.

As in home trade, slight distinction was drawn between goods and money. Each was a "way of remittance." Money might be preferable, but the creditor could often be bullied into taking goods; thus Hancock, after telling a London firm that no gold or bills are to be had, asks in what form they would like a debt in local money to be remitted, "and the longer it lyes the worse it will be as our money is daily sinking." Among the bills sent to Jamaica was one "payable on demand in Molasses."

The Hancock MSS are worthy of study by monetary theorists on many grounds. They illustrate the working of an economy whose money, as we have seen, was largely made up of goods, private or external paper, and private paper based on goods. The quantitative importance of these seems to call for investigation. Perhaps a clue to the matter may be obtained from the effect of the great public note issue of 1741–9; the volume of Massachusetts notes jumped from some £220,000 to £2,200,000, but the price of silver, and exchange rates, merely doubled.[25]

EARLY TEXTBOOKS AS EVIDENCE

So much for eighteenth-century colonial accounts. To what extent were they typical of other places and dates?

Europe was at that time producing a fair number of accounting textbooks.[26] These were usually illustrated with full specimen accounts. There seems no reason to doubt that such specimens give an adequate bird's-eye view of contemporary trade methods, and provide us with fairly reliable standards of comparison.

A survey of eighteenth-century books swiftly dispels any theory that the Hancock records were like those of western Europe. True, casual partnership, joint-ventures, and consignments are often met with, and some authors still talk of barter; but bookkeeping barter seems to become rare about the end of the seventeenth century (especially in home trade), and cash transactions abound throughout that century. The only triangular transfers spring from bills of exchange—and the latter are payable in money. In short, the textbooks are in some respects far more modern in flavor than the Colonial accounts. We may perhaps risk two generalizations:

(1) Textbooks and Colonial accounts are alike in their stress on joint-ventures, etc. (because companies had not yet replaced partnership as an outlet for the speculative), and on bills (because banks were not yet the staple agents for credit transfers). Incidentally, day books had nowhere won their complete victory over the journal, which suggests that the volume of straightforward transactions was too small to call for grouping in specialized books of original entry.

(2) On the other hand, textbooks differ from Colonial accounts in assuming that money is always available, and payment in kind a rarity.

The further back we go, however, the less seems to be the gulf between the two sets of evidence. Textbooks dated 1718,

[24] Nettels, *op. cit.*, p. 201; Baxter, *op. cit.*, p. 104.

[25] Davis, *op. cit.*, p. 367; *Proc. of American Acad.*, p. 211.

[26] The library of the Society of Accountants in Edinburgh (where I made this survey) contains ten works of the eighteenth century, and four of the seventeenth.

1635, and 1610 show signs of bookkeeping barter. And Jan Impyn (1547) lists the following ways of buying and selling, whose kinship to Boston methods is patent:

> "The first is with ready money. The second by tyme and daies of paimente. The third in geuyng wares for wares the whiche we call Bartery, and in Italien Barratto. The fourthe is with money, and part tyme. The fifth, with money and some wares, or other exchaunge. The sixt is by wares, and the rest for tyme. The seuenth by assignacion of one debtor to another. The eight one part by assignacion of redy money, and the other parte in wares, and tyme. And the nynth and last is by all condicions together, in geuyng money, wares assignacions, and for tyme.[27]

The researches of scholars lend color to the view that some of the Hancock methods had long been commonplace. "A general rule of Roman Law recognized transfer of obligation in books of account as a valid means of payment. Such operations were practiced by private persons as well as by the silversmiths (*argentarii*) who discharged many of the functions of the banker."[28] Professor Postan has mentioned medieval triangular transfers as substitutes for money.[29] And an able study of Italian accounts at the close of the Middle Ages confirms this; there was, we are told, a well-developed system of debt settlement based on substitutes for money—"the 'setting over' of debts was a common practice despite the absence of negotiable instruments. Local payments were often made by transfer in bank or by transfer of credit on the books of an ordinary merchant or a merchant-banker. Transfer orders were given not in writing, but by word of mouth."[30]

Let us now review our evidence. The Hancock MSS prove conclusively that, under Colonial conditions at least, any analysis of exchange into sequential phases of barter, money, and credit is indefensible; all three elements existed side by side, and were often interdependent. A comparison of the Hancock MSS with bookkeeping records of the Renaissance suggests that Europe was at that date emerging from a somewhat similar stage. We are thus not without justification if we regard Colonial accounts as clues to medieval practice; but conclusions based on the analogy must be very guarded until many more medieval records have been unearthed and studied. The last word obviously rests with the medieval scholars. I look forward in particular to further discoveries in the early story of bills. How is that story to be linked up with the innumerable notes that the Hancocks have left us? These seem to show that (a) orders in kind were an essential part of home trade; (b) bills could readily have developed out of the simple letters that shoppers would use daily when ordering goods; and (c) there was no marked gulf between home and foreign trade in the matter of payment methods.

If we discard the barter-money-credit theory of exchange phases, dare we hazard any alternative?

The phases suggested by accounting history are perhaps:

(1) *Pre-accounting age.* Presumably this is a time of crude barter, sometimes with credit.

(2) *Bookkeeping barter.* The "two-way flow" of goods allows traders to evade the worst drawbacks of crude barter. Some of the goods are commodity money. "Money of account" is the common denominator for reckoning, but the corresponding coins may not circulate much.

(3) *One-way flow.* Metallic and paper money are met with so freely that payment in kind is unnecessary. A merchant can divide his personal accounts into two groups, for suppliers and for customers. His transactions become so simple that he can segregate them in specialized day books.

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[27] *Op. cit.*, p. 24.

[28] Usher, *op. cit.*, p. 4. Later pages mention many medieval analogies to the Hancocks' oral and written transfers of money.

[29] *Op. cit.*, p. 246.

[30] R. de Roover, "Early Accounting Problems of Foreign Exchange," Accounting Review, 1944, p. 382.

(4) *Bank settlement.* Finally, the advantages of payment by cheque reduce cash settlements to a negligible scale. Clearance is centralized.

Such stages do not, of course, correspond crisply with successive periods of time. There must always have been some overlapping; probably all stages existed to some extent even in the Middle Ages. But each may well typify the procedure that was dominant in certain centuries.

Perhaps these accounting phases merely reflect steps in the evolution of the merchant. In the first, there are presumably few merchants, because craftsmen sell straight to customers without intervention by middlemen. In the second, the middleman has appeared, but he must be omnivorous, buying and selling almost everything, and so making his profits in a tediously roundabout way.[31] In the third, he can concentrate on one type of goods. In the fourth, he rids himself of the work of settlement, leaving it to professional bankers. If this analysis is correct, the key to exchange phases is *the merchant's degree of specialization.*

[31] A counterpart of the unspecialized Boston trader is suggested by E. F. Heckscher: "Natural and Money Economy as illustrated from Swedish History," *Journal of Economic and Business History*, III, p. 12.

AIR TRANSPORTATION ACCOUNTING

Louis E. Zraick

During World War II the United States Office of Education authorized many of our leading universities to conduct intensive courses in connection with the Engineering, Science, and Management War Training Program. Air Transportation Management was one of the selected subjects. The students eligible to take this course were, for the most part, employees of various airlines who were selected by university registrars as most likely to benefit from a course of this type. Through this undertaking, our government endeavored to promote the usefulness of airline employees at a time when the airlines were handling numerous war contracts.

Now that the war is over, airlines are growing on a scale greater than ever before. Numerous applications for expansion are now pending before the Civil Aeronautics Board in Washington, D.C. Many airline employees may wish to supplement their limited knowledge of transportation accounting. The lack of an adequate textbook on the subject and the inability of several colleges of business education to offer the essential courses have been impediments to those who would pursue this field of study. I should like to introduce this subject to present airline employees and to educators gradually, because it is my conviction that accountants in considerable numbers may, in the immediate future, secure employment in this rapidly growing new industry.

Air transportation is carried out today through the operation of approximately fifteen major airlines. Yet this type of transportation is relatively small in comparison with transportation by land, or water.

Airlines are subject to a greater degree of control than most private business corporations. The control lodged in the Civil Aeronautics Board over air carriers is similar in many respects to the control vested in the Interstate Commerce Commission over railroads and other common carriers by land.

A carrier may be described as an organization that transports persons or goods. If

its activities are confined to the continental limits of the United States, it is usually referred to as a domestic carrier. On the other hand, foreign carriers may operate all over the world.

In 1938, carriers by air were brought under Federal control by the enactment of the Civil Aeronautics Act. However, it was not until January 21, 1942, that the Civil Aeronautics Board, for the purpose of carrying out the provisions of that act and to exercise its powers and perform its duties thereunder, promulgated an amendment to Section 202.2 of the Economic Regulation, and provided, among other things, that all domestic and foreign carriers adopt as of January 1, 1942, a uniform system of accounts. The amendment to the regulation further provided as follows:

> Air Carriers, engaged in scheduled air transportation, shall keep any, and all accounts, records, memoranda, including accounts, records, and memoranda of the movement of traffic, as well as of the receipts and expenditures of money. It shall be unlawful for air carriers to keep any accounts, records, or memoranda after this date, other than those prescribed or approved by the Civil Aeronautics Board. Additional accounts, records, or memoranda may be kept, or any account included in the system may be subdivided, if such additional accounts or sub-accounts do not impair the integrity of the accounts, records, or memoranda prescribed, and do not constitute an undue financial burden. The title of all subdivisions of sub-accounts shall refer by account number and title to the account prescribed herein of which it is a subdivision. The numbers prefixed to account titles shall be considered a part of the title.

The Civil Aeronautics Board futher provided for the filing of periodic reports by all domestic air carriers on forms provided and these were required to be submitted within prescribed time limits.

AIRLINE ACCOUNTING ORGANIZATION

Remarks in this article pertain only to domestic air carriers. The accounts of an airline of this type are usually kept in two general divisions of the organization. First there is the division in which the bookkeeping records necessary in the preparation of financial statements are kept. Second, there is the division in which the many statistical reports are compiled and assembled for filing with the Civil Aeronautics Board. In many companies, the first division is further subdivided so as to provide for a separate department which handles only payroll matters. This is usually under the supervision of a chief payroll accountant.

The controller or chief accountant will usually supervise the preparation of the operating statements and the balance sheets which are made up each month as well as at the end of the calendar year. In addition, he usually has prepared under his supervision the fifteen schedules composing CAB Form 2780, which are required to be filed with the Civil Aeronautics Board. These schedules usually contain statistical data relative to aircraft operating expenses, ground and indirect expenses, station expenses, aircraft and aircraft engines acquired, traffic reports, aircraft miles flown and engine hours flown, etc. Each item of expense is divided by the figure representing total aircraft miles flown. This is done in order to arrive at an analysis of the cost per revenue mile.

Accounting Statements

The statement of profit and loss is prepared in two parts, the figures for the month covered and for the period to date being shown. In this way, the Civil Aeronautics Board may determine the cents per revenue mile for each item of expense on a monthly as well as on a cumulative basis.

The figures for any one month's operations are of little value for comparative purposes and do not represent a cycle of operations. The controller realizes this fact and is able to interpret figures for manage-

ment by taking this into consideration. He knows that domestic air carriers are not required to assemble data monthly for reporting revenues. A report of operating revenues is, however, filed quarterly, and this schedule must be filed within a forty-day period after the end of the quarter.

No expenses covering governmental contract operations are shown on the report of operational expenses. The total of aircraft operating expenses is divided by the total miles flown in order to arrive at the cost per mile, the result being usually stated in cents. The total aircraft operating expense is likewise divided by the total hours flown for the month in order to arrive at the cost per hour; this is usually stated in dollars. This schedule is usually submitted to the controller for review and must be filed within forty days after the end of the month. It will also show cumulative year-to-date figures.

The schedule of ground and indirect expense will disclose information both in total and in detail as to all commercial operating expenses incurred in connection with the maintenance of ground equipment and the depreciation charges on such equipment.

The schedule of station expenses consists of two parts. The domestic air carrier must first list all general and divisional expenses. An alphabetical listing of the expenses of all airports or stations of the carrier then follows. In case the airport is used for general operations or maintenance purposes, the expenses of such a nature are segregated from regular airport costs. It is necessary that this schedule be filed quarterly.

WARTIME PROBLEMS

Soon after World War II began the leading airlines received contracts from both the War and the Navy Departments for the expansion of cargo operations. Pilots, radio operators, flight engineers, and mechanics were greatly needed for this purpose. The airlines were requested to arrange for the training of additional personnel. Facilities of most airlines were limited for the most part, and a sufficient number of employees could not be trained by the airlines. It was therefore necessary for the airlines to subcontract for the training of the desired flight personnel. These contracts and subcontracts involved additional problems for management.

Cost-plus-fixed-fee contracts (CPFF) were entered into by many of the leading airlines with the various branches of the War and the Navy Departments. These contracts were in large part subject to renegotiation. The public vouchers were audited by the General Accounting Office and the contracting resident auditor. For these reasons, it was important that adequate provision be made for the allocation and proration of expenses. All expenses in connection with the war training program had to be charged to war contracts in some equitable manner. A few of the major items of expenses which involved problems of an accounting nature were compensation insurance, social security taxes, compensation paid to trainees, travel expenses en route to school assignments and return to the base station, travel and other expenses incurred in connection with obtaining students, tuition payable to subcontractors, and general supervisory salaries of employees devoting all their time to the training program but whose salaries could not be identified with a particular school.

It was necessary at the outset to adopt a system of accounts flexible enough so that provision could be made to distribute all such charges to a military account or subaccount within the broad chart of accounts prescribed by governmental regulatory agencies. Prorations of expenses were made in accordance with sound principles of accounting. To accomplish this end, numerous conferences were held from time

to time by the controller with the contracting resident auditor. It should be noted that all expenses had to be earmarked with an appropriate code number so as to facilitate the accumulation of costs by schools. The public voucher could then be prepared.

Expenses in behalf of cargo operations of a military nature were treated as "Direct Charges to War Contracts." Expenses distinctly applicable to commercial operations were charged to the domestic carrier. Then there were other expenses which had to be included in the basis of proration of joint indirect expenses between the scheduled "Air Transport Operation" and the "Cargo Contract Operation." A thorough knowledge of Section 90-704 Military Air Transport Regulations was necessary for the proper treatment of these wartime expenses. In connection with the allocation of expenses, it was necessary that all personnel who had occasion to issue any requisition for supplies or purchased material, or prepare any requisition, stock transfer, or payroll authorization, be thoroughly familiar with the various methods of proration of expenses, and the employee was required to show on the requisition or payroll authorization the proper subaccount to be charged

All wages and salaries for personnel assigned to "Transport Military Operations," and all expenses incurred directly for the benefit of the government in addition to those already mentioned in connection with the war training program, were earmarked by the appropriate station code designated in the chart of accounts for transport military operations. These were charged to the applicable expense account. This was necessary in order that these expenses could be segregated from the total recorded expenses for jointly operated stations.

It was likewise necessary to provide adjustments to these accounts in order to correct errors or incorrect charges resulting from a change in employee classification which had taken place after the payroll check had been issued and recorded in the payroll summary. It is to be noted that a considerable delay usually occurs (sometimes as much as two weeks) before the payroll authorization is received in the payroll department. As the public vouchers are in many instances prepared from the payroll summary, it is requisite that a journal be used to correct erroneous charges and this is the basis for the credit picked up on a later public voucher.

UNIFORM SYSTEM OF ACCOUNTS FOR DOMESTIC CARRIERS[1]

The manual contains a listing of account classifications together with an explanation of the type of charges that must be made to each account. An item list which appears on each page of the manual gives details of job classifications applicable to each account.

The accounting classifications for domestic air carriers, as contained in the uniform system of accounts, may be divided into four main groups:

1. Balance Sheet Accounts
2. Operating Revenue Accounts
3. Operating Expense Accounts
4. Income Accounts.

In most airlines today the reader will find a subdivision of accounts adopted for managerial purposes and budgetary control. The adoption of subaccounts enables management to record expenses by contracts, by stations, by departments, and by types of expense.

This is one field of endeavor in which loose-leaf binders seem to be prevalent and advisable. Changes of a substantial nature in accounting requirements are frequent, and the flexibility of the loose-leaf system

[1] "Uniform System of Accounts for Domestic Air Carriers (CAB form 2780," *Manual* 1-1-42) U. S. Printing Office.

of accounts seems to be advantageous under these circumstances.

In many airlines it is not unusual to find over a hundred journals in use. These books of original entry are loose-leaf and usually prepared on "jackets."

Most of the recording in books of account is done by machine, International Business Machines and others of a similar nature.

FINANCIAL STATEMENTS

The balance sheet is not much different from those found in other fields of transportation. The classification of assets will appear under the following captions: Current Assets, Investments and Special Funds, Operating Property and Equipment, Nonoperating Property and Equipment, Deferred Charges, Intangibles, and Capital Stock Discount and Expense. Under liabilities will be found the following captions: Current Liabilities, Long Term Debt, Deferred Credits, Valuation Reserves, Reserve for Depreciation, Operating Reserves, Capital Stock, Surplus, and Net Income for the current period.

It is in the income statement that we find the greatest difference between air transportation and other industries. Income is usually classified into two categories, operating and nonoperating. The major part of an airline's receipts will be represented by passenger fares, and revenue from mail, express, and freight. The majority of airlines also have what may be called incidental operating income. This income will be derived from restaurants and food services, service sales, rentals from operating property, limousine services, and other sources. Gross receipts will be shown for each type of incidental operating income or services, and the applicable operating expenses incurred in producing the income will be deducted and the net proceeds extended.

There are other items of income which do not result from operations but which must be considered. These may include profits on separatedly operated divisions, income from nonoperating property and equipment, gains on retirements of operating property, interest and dividend income, and cash discounts earned. Fixed fees paid to the airlines on the net profits arising from war contracts would also be included in this group.

EXPENSES CLASSIFIED BY DEPARTMENTS

While many airlines have subdivided their operating expenses into 15 or more groups, it is requisite that a minimum of 11 separate departments be used in order to adhere to the uniform system of accounts and to prepare the financial and statistical information required by governmental bodies. These departments are listed below:

1. Flying Operations
2. Ground Operations
3. Direct Maintenance on Flight Equipment
4. Direct Maintenance on Ground Equipment
5. Indirect Expenses (overhaul and engineering on Maintenance of Equipment)
6. Passenger Service
7. Traffic and Sales
8. Advertising and Publicity
9. Administration Expenses (including accounting, purchasing, supply, personnel, properties, selective service, medical, insurance, bonds, etc., any one of which may be assigned departmental status depending upon the size of the company, the work load, and the budgetary policies in effect)
10. Stations
11. Depreciation on Operating Property and Equipment.

The Statement of Income, Profit, and Loss for most domestic airlines will usually

have items that are nonoperative deductions from gross income. Some of the items of expense which may be found in this section are: amortization of discounts and expenses on debts, nonoperating property and equipment expenses, losses on separately operated divisions, extensions and development expenses, losses on retirement of operating property and equipment, losses on foreign exchanges, dividends, income taxes paid, and interest expenses.

CLASSIFICATION OF EXPENSES BY TYPES

There are principally 21 distinct types of expense in air transportation. These expenses will be found in all airlines. All payments made must be allocated to one or more related subaccounts. Care must be exercised, because the management must know whether or not actual costs meet with predetermined budget estimates. In war time, this was even more important, since the public vouchers prepared in connection with Army or Navy contracts had to be substantiated at the time of audit. The types of expenses follow:

1. Traffic and Sales Expenses (including newspaper and magazine advertising, motion picture expense, photographic supplies, memberships, dues, tariff schedules, injuries, loss and damage
3. Materials
4. Fuel for Planes (including gasoline, oil, tax on gas and oil)
5. Travel and Personal Expenses (segregated between commercial and military)
6. Rent of Flight Equipment
7. Passenger Expenses (including lunches, lunch equipment, and expenses of interrupted trips)
8. Sundry Operating Expenses (including damages to flight equipment)
9. Operating and Social Security Taxes
10. Sundry Maintenance Expenses
11. Motorized Vehicle Expenses (including all costs properly chargeable to ground operations; costs of operation of motorized vehicles, except repairs and depreciation; gasoline, oil, parking fees, tolls, antifreeze)
12. Servicing Supplies and Expenses. (including the cost of supplies and miscellaneous services used in cleaning and servicing of aircraft and cleaning ground operation hangars, also ground operation expenses)
13. Rentals
14. Heat, Light, Power, and Water
15. Office Supplies and Expenses
16. Telephone and Telegraph
17. Legal, Auditing, and Technical Service
18. Insurance
19. Pensions and Welfare Expenses
20. Other General and Administrative Expenses (including transfer and moving expenses, regulatory proceeding expenses, association dues and assessments, subscriptions to trade magazines and other publications, corporate and fiscal expenses, uncollectible revenue, and personnel advertising)
21. Depreciation of Operating Property and Equipment.

Anyone who is familiar with the accounting standards of the Civil Aeronautics Board will know that the assembling of prescribed financial and statistical information is a task that requires a high degree of proficiency by men and women who possess specialized education and training in the field of airline accounting.

It is hoped that in the months ahead the subject of airline accounting will receive considerable attention by our business schools and colleges. The record operating results experienced during 1945 by most of the domestic airlines because of abnormal war conditions will soon be publicized.

Earnings during 1944 were the largest experienced in any year since the industry began. It is reasonable to expect that this will continue during the years ahead. Airline transportation will embark on a program of expansion and growth that will demand trained personnel on a scale greater than ever. Administration and accounting problems will multiply. Are the colleges and universities preparing to help meet this new demand for trained personnel in this new field?

II. THE CLASSIFICATION AND CONTROL OF NAVY EXPENDITURES

W. K. Pierpont

In the first part of this article the classification of Navy expenditures by appropriations was described. Here expenditure classifications by objects will be considered.

As indicated previously, the Bureau of the budget prescribes an "object" classification by which budget estimates are to be submitted. Therefore, spending agencies provide an expenditure analysis by such objects to support their budget estimates and to meet the Bureau of the Budget's requirement for such a classification. The objects, based on the nature of the service or material purchased, prescribed by the Bureau of the Budget, are as follows:

01. Personal Services
02. Travel
03. Transportation of Things
04. Communication Services
05. Rents and Utility Services
06. Printing and Binding
07. Other Contractual Services
08. Supplies and Materials
09. Equipment
10. Lands and Structures
11. Grants, Contributions, and Subsidies
12. Pensions, Annuities, and Insurance Losses
13. Refunds, Awards, and Indemnities
14. Interest
15. Public Debt Retirement
16. Investments and Loans

This classification of expenditures by objects is accomplished in the Navy Department by coding disbursement and expenditure documents (public vouchers) authorizing payment for services or materials; procurement requisitions, contracts, etc., leading to public vouchers; the Analysis of Labor Roll Summary by Expenditure Classifications, a monthly report for labor similar to the Analysis of Materials Summary by Expenditure Classifications; and a Schedule of Collections. Provision for this classification may be noted on the sample form of the Analysis of Materials Summary by Expenditure Classifications at the bottom of the form in a separate schedule.

For internal Navy Department use in budgeting and purchasing activities and to supply additional information often requested at budget hearings, the object classification prescribed by the Bureau of the Budget has been expanded in the Navy according to the following objects:

01. Personal Services
    - 011 Personal services—departmental
    - 012 Personal services—group IV (b)—continental
    - 013 Personal services—group IV (b)—territorial and foreign
    - 014 Personal services—native and alien schedules—per annum basis
    - 015 Personal services—group, I, II, III, and IV (a)—continental
    - 016 Personal services—groups I, II, III, and IV (a)—territorial and foreign; native and alien on other than per annum basis

017 Personal services—contract employees
018 Personal services—military pay and allowances
019 All other personal services
02. Travel
020 Travel
03. Transportation of Things
030 All transportation of things
04. Communication Services
040 Communication services
05. Rents and Utility Services
051 Rent of land and buildings (including facilities, and utility and other services, included in the contract)
052 Rent of equipment
053 Utility services separately procured
054 Rent of rendezvous (including facilities, and utility and other services, included in the contract)
059 All other rents and utility services
06. Printing and Binding
061 Forms and letterheads, including tabulating cards
062 Books and publications, including manuals, pamphlets, periodicals, circulars, etc.
069 Other printing and binding
07. Other Contractual Services
071 Services procured from other government departments
072 Stevedoring
073 Contractual storage, handling, processing, and/or packing of Navy Stores and material, including household effects of naval and civilian personnel
079 All other contractual services
08. Supplies and Materials
081 Petroleum products
082 Coal
083 Office supplies
084 Clothing and clothing supplies (except burial clothing)
089 All other supplies and materials
09. Equipment
091 Furniture and furnishings for officers' quarters
092 Office equipment
093 Other furniture, furnishings, and fixtures
094 Transportation equipment
095 Stores handling equipment
099 All other equipment
10. Land and Structures
101 Land
102 Non-structural improvements
103 Buildings
104 Fixed equipment (items permanently installed in buildings, such as elevators, plumbing, fire alarm systems, heating, or refrigeration systems, etc.)
109 All other lands and structures
11. Grants, Contributions, and Subsidies
110 Grants, contributions, and subsidies
12. Pensions, Annuities, and Insurance Losses
120 Pensions, annuities, and insurance losses
13. Refunds, Awards, and Indemnities
131 Losses in accounts as approved by the Secretary of the Navy
132 Claims for damages in foreign countries as allowed by Foreign Claims Commissions
133 Reimbursements for losses of personal property—naval and civilian personnel
139 All other refunds, awards, and indemnities
14. Interest
140 Interest
15. Public Debt Retirement
150 Public debt retirement
16. Investments and Loans
160 Investments and loans

The object classification required by the Bureau of the Budget of all Federal departments permits the preparation of a statement of the total expenditures of the Federal government by broad classifications of expenditures. It may also be used to compare in a broad manner the operation of various departments in several respects, for example, the proportion of total expenditures charged for personal services.

Since this classification is essentially only a very broad one, it is not sufficient for use by the Navy Department in controlling its funds in detail. For example, object classification 08 for supplies and materials must necessarily be broken down into much more detail if the various bureaus and offices of the Navy are to control their expenditures efficiently. The next section, accordingly, describes the detailed expenditure accounts used by the Navy to

classify and control expenditures internally.

EXPENDITURE CLASSIFICATION BY PURPOSES OR EXPENDITURE ACCOUNT

In addition to an analysis of expenditures by appropriation and object, the Navy Department's accounting procedures provide an analysis of expenditures "under purpose headings in order that the cost of various activities of the Naval Establishment may be available for administrative purposes and also in order that cost analyses may be furnished under the various appropriations when needed."[1]

The major series of expenditure accounts for expenditure analysis comprises nine groups of accounts with various subaccounts to show expenditures according to these classifications:

Major Series	Description of Account
10000	Naval Vessels
11000	Acquisition of Naval Vessels
12000	Equipage
13000	Consumable Supplies
14000	Repairs
15000	Alterations
19000	Miscellaneous Ship Costs
20000	Ordnance
21000	Permanently Installed Ordnance
22000	Issues to Service: Ordnance Equipage
23000	Issues to Service: Ordnance Supplies
24000	Overhaul, Upkeep, and Repair of Ordnance Equipage in Service
25000	Alteration of Ordnance Equipage and Material in Service and in Store
26000	Training in the Use of Ordnance and Explosives
27000	Proof and Test of Ordnance Equipment and Material
29000	Miscellaneous Ordnance Activities
30000	Aircraft, Engines, and Other Equipage
31000	Purchase or Manufacture of Complete Aircraft and Accessories
32000	Issues of Equipage
33000	Maintenance and Operation of Aircraft
34000	Overhaul and Reconditioning of Aircraft or Engines
35000	Modification of Aircraft, Engines, and Equipage
36000	Repairs to Aircraft, Engines, and Equipage
39000	Miscellaneous
40000	Yards and Stations: Field Activities
41000	Plant Property (New and Complete Units)
42000	Alterations and Improvements to Existing Plant Property
43000	Replacements of Plant Property
44000	Plant Maintenance, Upkeep, and Repairs
45000	Plant Operations
46000	Experimental and Development Programs
48000	Clearing Accounts
49000	Miscellaneous Field Expenditures
50000	Stores Purchases and Transfers
51000	Naval Stock Account
52000	Appropriation Purchases Account
53000	Clothing and Small Stores Account
55000	Ships Material Account
57000	Naval Procurement Account
58000	Medical Stores Account
60000	Manufacturing for Stores; Repairs to Materials and Equipment in Store
61000	Naval Stock Account
62000	Appropriation Purchases Account
63000	Clothing and Small Stores Account
65000	Ships Material Account
67000	Naval Procurement Account
69000	Repairs to Materials and Equipment in Store
70000	Military
71000	Pay and Allowances
72000	Outfitting
73000	Subsistence
74000	Transportation
75000	Procurement of Personnel
76000	Training and Instruction
77000	Welfare, Recreation, and Physical Training
79000	Miscellaneous
80000	Navy Department
81000	Bureaus and Offices of the Navy Department
87000	Marine Corps: Headquarters and Field Expenses
88000	Coast Guard: Headquarters and Field Expenses
90000	Accounts Receivable; Losses in Stores and Miscellaneous Expenditures
96000	Defense Aid Expenditures under Regular Navy Appropriations

[1] *Bureau of Supplies and Accounts Manual*, Article 501-2(a).

97000	Defense Aid Expenditures under Defense Aid Appropriations Allocated to the Navy
98000	Accounts Receivable Clearing Accounts
99000	Losses in Stores and Miscellaneous Expenditures

The 10,000, 20,000, 30,000, and 70,000 series of accounts are of the same nature, accounts which classify expenditures for ships, guns, aircraft, and personnel, in accordance with the desires of the Bureau of Ships, Bureau of Ordnance, Bureau of Aeronautics, and Bureau of Naval Personnel. The 40,000 series of accounts is applicable to all naval shore stations regardless of the nature of the work carried on or the bureau or office which has jurisdiction over the shore station. The 50,000 and 60,000 series of accounts are the inventory or stores accounts described in the earlier section on the analysis of expenditures by appropriations. The 80,000 series of accounts classifies expenditures for the Navy Department in Washington and for the Marine Corps and Coast Guard as indicated, and the 90,000 series indicates miscellaneous expenditures of various kinds.

Each of the four major series of accounts for ships, guns, aircraft, and personnel is broken down in the last three digits to give certain detailed information considered desirable by the interested bureau. For example, the 20,000 series of accounts showing Bureau of Ordnance expenditures for ordnance material and specific Bureau of Ordnance activities is broken down in the five digits to indicate the following information:

The detail of the Use digits was shown previously in the Description of Account column.

The digits for the Class of Distribution are as follows:

1 Naval Vessels
2 Naval Aircraft
3 Naval Ground Forces
4 Marine Corps
5 Coast Guard
6 Merchant Vessels
7 Shore Defense
9 Other

The digits for the Category of Material (General) are as follows:

0 Armor
1 Guns
2 Mounts
3 Fire Control
4 Ammunition
5 Rockets
6 Underwater Ordnance
7 Aviation Ordnance
8 Other Ordnance Equipment and Material
9 Miscellaneous

Each digit representing a general category of material is broken down to show from one to ten detailed categories of material. The digit for guns, for example, is broken down to show the following classification of expenditures for guns:

0 Small Arms
1 Heavy Machine Guns
2 Medium Caliber Guns
3 Major Caliber Guns
4 Projectors and Mortars: Shipboard
5 Rocket Launchers: Shipboard
6 Rocket Launchers and Mortars: Infantry
7 Line Throwing Guns and Equipment
8 Catapult Guns
9 Unclassified

Likewise, the 40,000 through 45,000 se-

	Explanation of Digits	Expenditure Account No. 22113
Major Series	Ordnance	2
Use	Issue of Equipage	2
Class of Distribution	Naval Vessels	1
Category of Material (General)	Guns	1
Category of Material (Detail)	Major Caliber Guns	3

(Issue of major caliber guns to a naval vessel)

ries of accounts, chargeable for expenditures at naval shore stations, is broken down in the last three digits to give detailed information on the cost of maintaining and operating various activities performed at these stations. Accordingly, the expenditure accounts for this series indicate the following information:

12 Station Wagons, Busses, Motorcycles, Scooters, and Bicycles
13 Passenger Carrying Vehicles (exclusive of those listed in 12)
14 Mobile Fire Apparatus
15 Garages
16 Ambulances
17 Crash Trucks
99 Unclassified

Explanation of Digits		Expenditure Account No. 41215
Major Series	Yards and Stations	4
Nature of Expenditure	New Building	1
Station Activity (General)	Transportation	2
Station Activity (Detail)	Garage	1, 5
	(Construction of a garage)	

The detail of the Nature of Expenditure digits was shown previously in the Description of Account column.

The digits for the Station Activities (General) are as follows:

0 Administration
1 Supply System
2 Transportation
3 Power, Heating, Refrigeration
4 Distributing and Communications System
5 Grounds and Ground Structures
6 Waterfront and Waterfront Structures
7 Personnel Facilities
8 Hospitals, Medical Centers, Dispensaries
9 Productive Shops

The general station activities are broken down in from one to ninety-nine classifications to indicate the detailed station activities. The digits for the detailed station activities may be illustrated by those for the Transportation group, as follows:

01 Locomotives
02 Rolling Stock
03 Miscellaneous Railroad (including turntables, watertowers, etc.)
04 Trackage
05 Locomotive Cranes
06 Other Weight Handling Equipment
07 Water Transportation
08 Team Transportation
09 Plane Transportation
10 Hand Transportation
11 Trucks, Tractors, Trailers, and Semi-Trailers

The 50,000 series of accounts for purchases for inventory and the 60,000 series of accounts for manufacturing for inventory are set up in a similar manner in that the second digit indicates the specific stores account involved in the transaction. Thus, the various stores accounts are shown by:

Naval Stock Account	51000 and 61000
Appropriation Purchases Account	52000 and 62000
Clothing and Small Stores Account	53000 and 63000
Ships Material Account	55000 and 65000
Naval Procurement Account	57000 and 67000
Medical Stores Account	58000

No further breakdown in the expenditure accounts is provided in the Naval Stock Account series. (However, stores are maintained by "Class" of material so that all accounting documents for material must indicate the class of material being purchased or expended to maintain stock record cards and prepare class inventory sheets.) The same situation also exists in the case of the Clothing and Small stores Account, the Ships Material Account, the Naval Procurement Account, and the Medical Stores Account. But in the use of the Appropriation Purchases Account the third digit indicates the bureau making the purchase or manufacture and the fourth

and fifth digits indicate the specific material involved. Thus, charges for material under the cognizance of the various bureaus will be shown by the following accounts:

Bureau of Naval Personnel	52200 and 62200
Bureau of Ships	52300 and 62300
Bureau of Ordnance	52400 and 62400
Bureau of Supplies and Accounts	52500 and 62500
Bureau of Medicine and Surgery	52600 and 62600
Bureau of Yards and Docks	52700 and 62700
Bureau of Aeronautics	52800 and 62800

And, in the case of the Bureau of Ordnance, the fourth and fifth digits will show the same categories of material as are shown in the 20,000 series of accounts.

An example of a complete account number in the 50,000 or 60,000 series of accounts may be indicated as follows:

	Explanation of Digits	Expenditure Account No. 52412
Major Series	Purchases	5
Stores Account	Appropriation Purchases Account	2
Bureau	Ordnance	4
Category of Material (General)	Guns	1
Category of Material (Detail)	Medium Caliber Guns	2

(Purchase of a medium caliber gun)

The basic procedures for analyzing transactions by expenditure account classifications are similar to those used in appropriation accounting. Each underlying document for all expenditures is coded to a specific expenditure account number, expenditures under the contractual documents are summarized on monthly or daily reports to the Bureau of Supplies and Accounts, and a tabulated summary is run monthly by the Bureau of Supplies and Accounts to show expenditures by account classification for all bureaus and offices.

In the case of labor at naval stations, for example, the charges are made to the expenditure accounts from various employee records, job order cards, clock cards, or time sheets, and reported to the Bureau of Supplies and Accounts monthly on the Analysis of Labor Roll Summary by Expenditure Classifications. In the case of material, the charges for material used are made to the expenditure accounts from the material stub requisitions and invoices authorizing the issue of material from the stores accounts.[2] These stubs are summarized and reported to the Bureau of Supplies and Accounts montlhy on the Analysis of Materials Summary by Expenditure Classifications.

The expenditure account classification presented in this section is the principal expenditure classification used by the Navy to indicate, according to the major activities or purposes of the Navy Department, the disposition of the moneys appropriated to it by Congress. A summary of expenditures by major series accounts will show an over-all picture of Navy expenditures, and further detail on various aspects of these expenditures is available whenever necessary in reflecting past expenditures and considering future budgets or appropriations.

EXPENDITURE CLASSIFICATIONS IN THE BUREAUS

The classifications of expenditures described previously are designed primarily

[2] With respect to the stores accounts, naval stations prepare monthly reports on the charges and credits to these stores accounts. The monthly report for the Naval Stock Account shows the receipts of material from various sources for the month and the issue of material for various uses for the month. A summary of all the reports for all naval stations will give the status of the Naval Stock Account at the end of a month. Similar reports are prepared for the other stores accounts.

to show from a historical point of view the status of appropriations or the amount of expenditures for the various bureaus or the Navy Department as a whole. In the Bureau of Ordnance and other bureaus, actual and anticipated expenditures are classified in another manner to show the status of the bureau appropriations or the amount of unobligated money within the Bureau and among the various divisions and activities of the Bureau. In general, these bureau classifications are peculiar to each bureau and essentially are detailed classifications under the appropriation classifications for the purpose of indicating the amount of the various appropriations available for future obligation and expenditure.

Moneys made available to the Bureau of Ordnance by appropriations from Congress are spent by the Bureau directly in payment for Bureau-purchased material or services and by Ordnance stations, acting under authorizations granted by the Bureau of Ordnance, in payment for station-purchased material or services. In either case, the internal classification and control of expenditures in the Bureau of Ordnance begins with the allocation of the money appropriated to the Bureau and to the various divisions of the Bureau. The annual appropriation in the Bureau of Ordnance is allocated to the various divisions, Research Division, Maintenance Division, Production Division, and the other divisions for direct expenditure by these divisions and also for reallocation by the divisions to Ordnance stations for expenditure by the stations. These broad allocations made at the beginning of the fiscal year are not final and are subject to change throughout the year as changes in the scope of the activities of the various divisions require more or less expenditures than originally estimated.

Secondly, the money allocated to any one division is broken down into sums allocated to various sections, generally representing types of material, or activities within the division. In the case of the Production Division, for example, allocations are made for the procurement of guns, mounts, ammunition, fire control, armor, projectiles, bombs, and other procurement and activities of the Division.

On the basis of these allocations to divisions and sections, accounting entries are made in a general ledger to establish control accounts for each division and section to show the amount of the appropriation unobligated and available for expenditures. A general ledger control is also established on the basis of the nature of the document authorizing expenditures to be made.

The appropriations granted to the Bureau of Ordnance are obligated by the Bureau, or allocated to the stations of the Bureau for expenditure, by various documents. Ordinarily, obligations arise from requisitions authorizing the Bureau of Supplies and Accounts to purchase supplies for the Bureau of Ordnance, from letters of intent granted to private contractors authorizing the expenditure of funds, from contracts issued to private contractors, and from project orders issued to naval stations. Although not considered as obligations in the usual sense, allotments of money granted to naval stations for current maintenance and operations tie up the Bureau's appropriations and restrict their use elsewhere so that in controlling the Bureau's appropriations allotments may also be considered as a form of obligation document.

Postings of obligations incurred by the various sections are made daily to the general ledger control accounts for each division and section. These same obligations are posted daily to the general ledger document control accounts also, mainly for purposes of internal check. A summary sheet showing unobligated or uncommitted

balances is prepared daily by divisions and sections, and by type of document, for use by the sections authorizing expenditures.

After obligations have been posted to the general ledger, a process of adjusting obligations to reflect changes in the original obligations or of liquidating actual expenditures against obligations is followed. In the case of requisitions or contracts no change is made in the general ledger obligation accounts unless there is a change in the expenditures anticipated in the original requisition or contract, which expenditures were set up as the obligation in the beginning. If at any time the original requisition or contract amount is changed, the general ledger is adjusted to show the new obligation, and expenditure if the requisition or contract is completely paid for. In the case of letters of intent, which authorize the expenditure of a limited sum of money to begin work, the obligation is always adjusted to the terms of the final contract when executed. In the case of project orders issued to Ordnance stations, at the completion of the work authorized under the project order and on the basis of the actual expenditures reported under the project order, the general ledger obligation control accounts are adjusted to liquidate the expenditures against the obligations. Also, in the case of the maintenance and operation allotments, which usually are granted for a three-month period, the original amount of the allotment established at the beginning of the quarter is adjusted at the end of the quarter to reflect actual expenditures. These actual expenditures are reported monthly to the Bureau on the Materials Summary and Labor Roll Summary reports.

Although the internal Bureau of Ordnance classification is one of obligations for control purposes, expenditures under the obligating documents automatically turn this into an expenditure classification by bureau activity or by a bureau's internal organization structure.

EXPENDITURE CLASSIFICATIONS AT YARDS AND STATIONS

As noted in the previous section, part of the allocations made to the various divisions in the Bureau of Ordnance are in turn made available to Ordnance shore stations to accomplish the work assigned to these stations. Two basic kinds of documents are used to make these further allocations, allotments and project orders, both of which are written under an appropriation named in the document.

Allotments are usually granted to authorize payments for maintenance and operation expenditures chargeable to the 40,000 series of accounts. These allotments authorize expenditures for one year and lapse for both obligations and expenditures at the end of the year in which granted.

Project orders are granted to authorize payments for expenditures incurred in procuring new equipment or technical ordnance material or in manufacturing new equipment or technical ordnance material. These expenditures are chargeable to the 40,000 series of accounts if for new equipment, to the 50,000 series of accounts if for purchases of technical ordnance material, and to the 60,000 series of accounts if for the manufacture of technical ordnance material. These project orders are legal obligations when issued and do not lapse for expenditure when the appropriations under which they are granted lapse. In general, expenditures may be made under these project orders for two years after the end of the year in which granted.

Allotment Expenditures

The allotment covering station operation and maintenance expenditures provides money for a wide variety of activities or functions. But a detailed classification is made of the expenditures under this al-

lotment by the use of the 40,000 series of expenditure accounts.

A further classification of allotment expenditures is also available by the use of a so-called "physical" classification of accounts. The physical classification of expenditure accounts at shore stations is provided primarily to furnish information to establish the underlying plant records maintained at all naval establishments and to furnish detailed information on the nature of labor costs, whether supervisory labor, non-supervisory labor, or absences for which payments are made. This classification provides for ten physical classes of expenditures as indicated by the following digits:

Digit	Physical Class of Expenditures
0	Labor and miscellaneous supplies
1	Losses, annual and sick leave, waste
2	Land and appurtenances
3	Buildings and structures
4	Miscellaneous equipment
5	Plant appliances
6	Machinery and machine tools
7	Portable power tools
8	Loose and hand tools
9	Supervision

The use of the physical account classifications may be illustrated as follows:

	Explanation of Digits	Expenditure Account
(1)		No. 42201 −3
Major Series	Yards and Stations..............	4
Nature of Expenditure	Alteration and Improvement......	2
Station Activity (General)	Transportation....................	2
Station Activity (Detail)	Locomotive.......................	0, 1
Physical Class	Buildings and Structures.........	−3
	(Alteration to a railroad roundhouse)	

		Expenditure Account
(2)		No. 45101 −9
Major Series	Yards and Stations..............	4
Nature of Expenditure	Operation........................	5
Station Activity (General)	Supply System....................	1
Station Activity (Detail)	Purchasing.......................	0, 1
Physical Class	Supervision......................	9
	(Supervision of purchasing clerks)	

Expenditures under the station maintenance and operation allotment are classified at shore stations by using the standard expenditure account classification for yards and stations (40,000 series of accounts) as job orders to accomplish the work of the station. Expenditures under these job orders or accounts are closed each month to the proper allotment and thus may be classified by appropriation. And third, the object classification is shown on disbursing vouchers or monthly reports for all such expenditures at yards and stations. These expenditures are classified and reported to the Bureau of Supplies and Accounts and the Bureau of Ordnance on the Analysis of Labor Roll Summary by Expenditure Classifications, the Analysis of Materials Summary by Expenditure Classifications, the Labor Roll Summary, and the Materials Summary.

Project Order Expenditures

Expenditures under project orders are controlled at Ordnance stations by the issue of job orders to accomplish the work authorized under project orders. Expenditures assigned to the job orders during the month are closed out to the proper project orders and appropriations at the end of the month and reported to the Bureau of Supplies and Accounts and the Bureau of Ordnance on the same reports that are used to report allotment expenditures. Expenditures under project orders are also classi-

fied by object, purpose or expenditure account, and physical class and reported to the Bureaus monthly in the same manner as with allotment expenditures.

Collection of Labor and Material Cost

The detailed procedures used at a station to collect labor and material costs by job orders for expenditure classification purposes follow standard commercial practices, with minor modifications to meet local situations. Labor time is assigned to job orders by time clerks or supervisors and reported to the accounting department on job tickets or time sheets. These labor time reports and applicable labor rates are used to compute costs by job orders for the time period covered by the reports. Material costs by job orders are determined from material requisitions prepared by material clerks or supervisors to obtain material from the storehouses, the requisition showing the job order chargeable for the material obtained. Labor and material costs per job order as determined above are posted to a job order ledger and thus summarized by allotments or project orders, appropriations, and expenditure accounts.

In case there is a distribution of overhead to job orders, standard commercial practices are followed to collect the overhead costs by departments or other overhead centers and to apply the overhead to the job orders.

The classification of expenditures in the Navy Department consists essentially of a threefold classification, by Congressional appropriation, by Bureau of the Budget object, and by Navy expenditure account. In addition to these basic classifications, there are secondary classifications in the bureaus and offices and at yards and stations. Each of these classifications is for a specific purpose of major importance in the administration of the moneys appropriated for Navy Department use.

From the point of view of the Navy, accounting for expenditures by appropriations indicates the legality of expenditure subject to audit and review by the General Accounting Office; accounting for expenditures by Budget objects not only fulfills the requirements of the Bureau of the Budget for such information but aids materially in supporting budget requests before that Bureau; accounting for expenditures by Navy expenditure accounts indicates historically the use of the appropriations granted to the Navy and makes possible a clear-cut presentation of the major functions and activities of the Navy in monetary terms.

ECONOMIC ABRACADABRA

Joe Bond

The October, 1945, issue of the Accounting Review carries an article by James C. Bonbright, entitled "Original Cost as A Rate Base," and representing, according to a footnote attached thereto, a part of the direct testimony of Professor Bonbright before the Public Service Commission of Maryland, April 3, 1945, in a case involving the rates of Consolidated Gas, Electric Light & Power Company of Baltimore.

If the statements and arguments contained in this article were offered as mere classroom material, or as the mere presentation of an interesting economic philosophy or theory differing from or opposed to that which underlies and has influenced our entire national economy, these views

would represent merely an interesting economic discussion. But if such arguments are offered as an authoritative interpretation of our established economic principles and as a proposed legal yardstick for the measuring of property or of property rights accruing to ownership under our established economic system, they should not go unchallenged.

Mere economic theories, however interesting, and however learned the economists who advance them, do not become economic laws, change economic factors, or create economic results. Economic laws, factors, and results arise under, and are influenced and determined by established economic systems. Economic systems, in a democracy, are established or are initiated by the will or choice of the people who are affected thereby, and because of this fact they exist within and are protected by a legal framework consisting of established law as to property and property rights. Economists cannot change these established laws as to property or property rights by merely ignoring economic factors created as a result thereof. You cannot set aside an established fact by advancing a mere theory supported by clever arguments. Keeping these fundamental facts in our minds, let us examine this excerpt from the testimony of Professor Bonbright and see whether it represents arguments which merit the consideration of a judicial authority in a determination of the property or property rights of private ownership in a "private-enterprise" system of economy.

Although this testimony contains many inconsistencies and considerable "hedging," as a whole it can be considered as an endorsement by this well-known economist of "original cost" as a rate base, or as a measure of the present value of the property rights of the private owners of utility properties dedicated to public service. On page 441 (ACCOUNTING REVIEW) we find the following question and answer:

Question

What then, in your opinion, would constitute an appropriate measure of this rate base?

Answer

Broadly speaking, in my opinion, the rate base should be measured by the recorded or estimated original cost of the electrical utility properties minus a reasonable deduction for depreciation and plus whatever is an appropriate allowance for working capital, including materials and supplies.

The qualifying phrase, "broadly speaking," used to modify the above answer will be dealt with later.

In any discussion of "original cost" it must be remembered that the term "original cost," as used in regulatory matters and as defined in the uniform system of accounts which provides for its segregation does not mean actual cost, but that it is, instead, a descriptive title applied to a mere subdivision of the actual arms-length cost. An official explanation of the system, of accounts together with authoritative definitions of terms, is found in the Federal Power Commission's Opinion and Order No. 120, issued February 13, 1945, in connection with the Montana Power Company matter. This formal explanation, set out on page 5 of the opinion, reads as follows:

The Uniform System of Accounts prescribes accounting based on a "cost," as distinguished from a "value" basis. It provides *two balance sheet accounts* into which, after appropriate study, the amounts on the books, associated with electric plant, as of the effective date, are to be classified:

100—Electric Plant
107—Electric Plant Adjustments

Account 100 includes the *actual legitimate cost*, i.e., *bona fide investment* of public utilities in electric plant. This account, in turn, is subdivided into numerous sub-accounts. In certain of these the original cost of particular plant items (those for generating stations, transmission lines, etc.) is to be stated. By original cost *is meant the cost to the person first devoting the properties to public*

> *service.* Where the accounting utility was the first to devote the property to public service, original cost is cost to it. Where the accounting utility has purchased an operating system at *arms-length for more or less than original cost,* the difference is classified in another *sub-account to Account 100,* designated *Account 100.5,* Electric Plant Acquisition Adjustments.
>
> Account 107 is designed especially to include *all write-ups, inflation, "water"* and *other fictitious* amounts which have been injected into the books of accounts. This account was purposely made a balance sheet account in order to inform those interested as to the *inflation in the accounts* of a particular utility, pending disposition oft he amount thereof. (emphasis supplied)

The foregoing official definition shows that the term "original cost" does not represent the actual arms-length cost when an operating or "going" concern is purchased "for more or less than original cost." It also shows conclusively that this segregated "original cost" does not represent the "bona fide investment" of the utility in such going concern, but that instead the "bona fide investment" also includes *all actual arms-length costs* in excess of the "original cost" segregated in. Account 100.5. This official definition also shows that these costs, in excess of "original cost" and segregated in the subaccount 100.5, are not to be considered as "inflation" or as "inflationary," since all items subject to this description are excluded in their entirety from Account 100, and segregated in Account 107.

It is apparent, therefore, that an "original cost" rate-base theory departs entirely from actual arms-length cost, or "bona fide investment" as a measure of the property or property right of the private investor in utility property, and adopts instead a peculiar economic philosophy which enthrones a mere subdivision of such costs as a final ceiling or limit to the present value of all future benefits accruing to ownership from the possession of such property or property rights. "Broadly speaking," Professor Bonbright endorses an "original cost" rate-base.

The significant and distinguishing feature of an "original cost" rate-base is the fact that it denies the validity of that part of the actual arms-length cost or that part of the "bona fide investment" which is segregated in Account 100.5, as a part of the actual investment in utility property dedicated to public service. It limits the property or property right dedicated to public service to a mere right to a fair return on the "original cost" of the installed physical component of an operating or going concern, and by such limitations excludes as a valid or prudent expenditure, all costs incurred in recognition of intangible attributes inherent in or accruing to such entity as an operating or going concern. It completely erases all intangibles or intangible attributes which have accrued to an operating or going utility property as a property or property right of the private owners, even when such attributes have been recognized and acquired from former owners at prices determined by arms-length bargaining.

This is the rate-base policy, or regulatory philosophy, that Professor Bonbright, "broadly speaking," approves. Notice also that the implied qualification, "broadly speaking," did not prevent his indictment of all costs segregated in Account 100.5 in the specific rate-base under discussion.

Although the witness qualifies his approval of "original cost" as a rate-base, a careful reading of the entire article will show that he qualifies his qualification and that he even goes so far as to qualify his qualification of his qualification. This adroit screening, however, is not sufficient to obscure the fact that Professor Bonbright does not recognize the private ownership of public utility property, as owners, but that he instead sees such ownership as a mere creditor of a publicly owned property with its creditor position or creditor rights measured by the funds

advanced by the "owner" who first installed the facilities. Under his peculiar concept, the original owner had no property or property right to convey to a subsequent purchaser or later owner, except a creditor's right measured by the funds advanced to install the facilities. The witness makes this clear in a statement on page 443 (ACCOUNTING REVIEW), which reads as follows:

> "The *fallacy* of this argument in favor of a rate base measured ***not by original cost but by subsequent purchase price*** should be apparent to anyone who understands the ***basic philosophy*** of the 'prudent investment' standard." (emphasis supplied)

And further on in this paragraph we find:

> "Once these utility properties have been built and have been put into public service, investors who buy them later from their original owners are ***simply taking over these former owners' claims to a return on the capital devoted to the public service.*** " (emphasis supplied)

Under this concept any values accruing to the over-all earning entity from intangible attributes are excluded from the rights of the owners and assigned to the public as social values, the benefits from which should accrue to society as a whole. Now this is an interesting theory, cleverly advanced; but does it represent a proper legal yardstick for the measuring of the property or property rights of private owners under our established national economy, or under a "private enterprise" system? Suppose we compare it with the established fundamental principles which underlie and govern property rights under a "private enterprise" system of economy.

"Private enterprise" or, as it is sometimes called, the "profits system" recognizes four basic contributors to production, these being land, labor, capital, and enterprise. As an incentive to these basic contributors and as compensation for their contributions, land receives rent, labor receives wages, capital receives interest, and enterprise receives profits. The basic or distinguishing feature of this system of economy is the incentive, or compensation assigned to enterprise, or the "profits" feature. The inducement offered to enterprise is in the nature of a reward, measured and influenced by the wisdom with which the other three factors are coordinated and used. The contribution of enterprise is a product of brain not of brawn, and the value of this contribution can be measured only by the results obtained. Being always contingent on results, it is measured or influenced not by "toil or effort" and "sacrifice or cost," but solely by such intangible attributes as wisdom, ability, ingenuity, foresight, etc.

The private enterprise or profits system of economy assigns the role of enterprise to the private owner or to the individual, and offers to such owner the opportunity to profit, from his own individual initiative and wisdom in the coordination and productive use of the other three factors of production. The opportunity offered to the entrepreneur to create this additional value, and the judicial recognition throughout the past of such value as a property or property right of the creator, together with the faith and confidence of the American investor in his ability to create such values, has been the incentive to the growth and development of our whole American economy. To the extent that the entrepreneur contributes capital, he is also entitled to interest compensation. A mere fair return on his capital contribution, however, does not take away his established right to the profit accruing from the wise use of the total combined factors of land, labor, and capital. It does not constitute compensation for his contribution as an entrepreneur which, under this economic system, is always represented by such intangible attributes as are built into or are inherent in an established successful "going concern."

Under this system, value, as such, is a property or property right, and the right of the individual to possess and use those values arising from intangible attributes, created or acquired by such individual, has been and is now the very tap root of the private enterprise system of economy. It must be apparent therefore, that the "original cost" rate-base philosophy, which denies to the private owners of public utility properties the right to benefit from intangibles and restricts such owners to a mere fair return on the capital contribution of some predecessor in title, is utterly foreign to the "private enterprise" system of economy.

While the "original cost" rate base philosophy is peculiar, when its economic principles are compared with those which underlie our established economy, it is not new. These principles are as old as the science of economy and have long been advocated by a small minority as a desirable substitute for those principles which are embodied in and constitute the "private enterprise" system that makes up our established national economy. A very simple analysis will show that these substitute principles reconcile with, or that they actually constitute, a socialistic economic philosophy.

A socialistic economy restricts the rewards which can accrue to the individual to rent (for land and equipment), wages (for labor or effort), and interest (for capital contributions). It construes all advantages arising from such intangible attributes as excess ability, initiative, foresight, enterprise, etc., as a social advantage, and assigns all values arising therefrom to society as "social values" or as "public property." Socialism recognizes the fact that an assignment of the reward for enterprise or ownership to society, or to the public, destroys the incentive of individual contributors of this essential factor of production. Therefore, this system provides that the role of the entrepreneur or of ownership rests in the state as the representative of society. Under this system the private owner or investor becomes a mere creditor to a publicly owned enterprise, and as a creditor is entitled to a mere creditor's return on his capital contributions to such enterprise, to a mere interest reward. Under the "original cost" philosophy even this reward is restricted to an interest reward based on the ancient contribution of some prior owner.

It is apparent therefore that the yardstick which the author advocates for the measuring of the property rights of the private owners of public utilities would be valid or proper only under an established socialistic economy. His advocacy of "original cost" as a legal measure of the property or property rights of the private owners of public utilities can only mean that he considers the power to regulate as the authority to socialize, and the dedication of property to public service as the surrender of such property to public ownership. He is evidently of the opinion that the consistent rejection of this concept by the public, through the exercise of its franchise privilege, has been unwise, and that in the interest of the public welfare this objection or restraint imposed by the public can and should be circumvented by the use of regulatory powers supported by sophistic arguments.

That such a use of regulatory power is improper is readily apparent when we recognize the fact that regulation or regulatory powers are to be used in lieu of, or as a substitute for, competition. Regulations are imposed to safeguard the public interest in case competition is erased by the possession of a monopolistic franchise. In a proper use of such power a regulatory authority must recognize the impact of all those valid economic factors and principles which exist in a free and private enterprise

form of economy, of course with the added duty of excluding values which arise solely from that privilege not enjoyed by free enterprise, that is, values arising solely from exclusive trade territories. The argument that regulatory authority carries with it the power and the duty of erasing value as a property or property right of a private owner, and the substitution therefor of a mere creditor's right, is absurd. If mere cost to a predecessor in title does not measure the owner's property right under competitive conditions, it cannot become a legal or proper measure under regulations. That the witness would change all the economic rules and principles through this use of regulatory powers is apparent when we review his well-known text *Valuation of Property*. Remembering that "value" is a property or property right under a private enterprise system of economy, let us see whether his concept of this right, under competitive conditions, reconciles with the concept he would impose through regulatory powers. On page 76 of the 1937 edition of his text we find the following statement:

> One of the most important but most frequently disregarded *truths about value*, is that only by a somewhat *rare coincidence does the sum of the values* of the *different parts* of an *organic whole equal* the *value of the whole*. If the parts are valued as separated from the whole, the sum of their values *is likely to be far less* than *the value of the whole*. On the other hand, if the parts are valued as parts of the whole, their sum total of values may greatly exceed the value of the whole. (emphasis supplied)

Compare the above concept with one which would actually measure the value of the property or property right of the private owners of an operating utility company as the sum of the cost to some predecessor of the component parts integrated to form the going concern.

Page 77:

> Misled by the mathematical postulate, applied to separate relationship, that "the whole is equal to the sum of its parts," many courts, and even some expert appraisers, have *falsely inferred that the value of an economic whole is equal to the sum of the value of its parts*. (emphasis supplied)

Page 109:

> This growing experience of the courts with the valuation of intangibles is gradually destroying the *illusion of a "physical value"* even with respect to tangible assets. But the process of education is a slow one, and the tendency of the courts to *break away from the notion of a* "physical value," or of an intrinsic value *based on past costs rather than on future opportunities* is still in a transitional stage. (emphasis supplied)

In the above statement, the "original cost" concept, which does limit value to "a physical value, or an intrinsic value based on cost rather than on future opportunities," is called an illusion by the author. Yet by the use of regulatory powers, he would impose this illusion on the private owners of utility properties as an established fact.

Page 170:

> Any attempt to value the asset by assigning to it some "fair share" of the earning power of the organic enterprise is *utterly invalid* from an appraisal standpoint since it involves *the false assumption of an equation between the value of the whole going concern and the sum of the value of the individual parts*. (emphasis supplied)

Yet the author would impose this "false assumption" as a fact or as a *legal* yardstick for the measurement of the property rights of the owners of utility property.

Page 265:

> In all respects the relationship between the *commercial value* of a business and the *so-called* physical values of its assets is *highly indirect* and *uncertain*. *Almost never does it justify an assumption* that the *"values"* (that is the depreciated costs) *of the latter even roughly measure the value of the former*. (emphasis supplied)

Yet the author would, through the use of regulatory powers, impose this unjustified "assumption" as an established economic principle. Isn't it a little bit absurd to argue that the mere substitution

of regulatory powers for competition has the effect of transforming the very same economic *fallacies* into economic *facts*? The author admits in his text that this peculiar regulatory view represents a minority view, and that few lawyers, accountants, businessmen, or courts have ever accepted it.

Page 1081:

> So the *courts* refer to the determination of a rate base as one of *"finding out" what the* "present value" or "fair value" of the property *really is*, whereas, *the economist* refers to the same problem *as one of choosing a proper rate base*—of deciding how much the property *should be permitted to be worth* rather than discovering how much *it is actually worth*. (emphasis supplied)

Here the author admits that he would impose his own individual theory as a substitute for an established fact. He is not concerned as to what the value really is, which under our established economic system is a property or property right. His sole concern is the imposition of his own concept of what this right should be. In his opinion it is a moral or social question rather than an established legal one. That this peculiar view does not fit within the legal framework which controls and protects our private enterprise system of economy is further emphasized by a statement on page 1081.

> The sharp disagreement among American economists as to what constitutes a proper rate base makes all the more striking their *apparently unanimous agreement* that, whatever this base *should be*, the one measure *which is outlawed is the very measure which the Supreme Court has held to be controlling*—namely, *the "value" of the properties as of the time when the rates are under consideration*. (emphasis supplied)

Property and property rights are a creation of law, and the sanctity of these rights, as measured and defined by established law, has been the foundation for our whole national economy. In the above statement the author admits that his concept of the property rights of the private owner of public utilities does not reconcile with established law. This is further emphasized by the following statement on page 1082.

> Hadley, indeed, once remarked that he could recall *but one economist who agreed with the courts* in accepting "value" as a measure of the rate base, and he added that this economist was dead. (emphasis supplied) . . . The striking nature of this rift of thinking between persons trained in *economics* and persons trained in *law* was impressed upon the writer some years ago, when he offered simultaneous courses on valuation and utility economics in the Columbia Law School and the Harvard University Department of Economics. When the *law students* were presented with the assertion of the economists that *"value" is a logically unsound basis of rate control*, many of them *at once took issue* and *remained unconvinced* at the end of the session. But when the same viewpoint was presented to the *economic students*, they *accepted it as a truism* too obvious to warrant discussion. (emphasis supplied)

Does not the author, in pointing out what he considers a "mote" in the eyes of the courts and the legal profession, entirely overlook a socialistic "beam" in his own eye, which blinds him to the fact that property and property rights arise under, and are measured by, established legal concepts; that their validity or nonvalidity does not depend solely on the social view of such regulatory authority as chanced to be currently in power?

Page 1084:

> The lack of sharpness in their (the lawyers') value concept explains why most *lawyers are not easily impressed with the "circular reasoning" charge* that the economists bring against the "present value" doctrine. (emphasis supplied)

Now let us see whether we can discover why it is that "lawyers are not easily impressed" with the "circular reasoning," or as it is sometimes called "the vicious circle" arguments, so often advanced by some economists in support of an "original cost" rate base.

The argument is usually advanced against the enthronement of the actual purchase price of an operating utility

property as a rate base, or as a measure of the present value of the future benefits of possession, or future earning power. The argument points out the fact that the purchase price reflects the purchaser's estimate of the present value of future earnings, and that the enthronement of this estimate as a rate base protects the purchaser in his estimate by providing that future rates be such as would establish this estimate as an actual measure of their present value. Economists point out the fact that arguments that properties are worth what they can earn and that they should earn a fair return on cost represent "circular reasoning." Most proponents of an "original cost" rate base call such a theory the "vicious circle," yet at the same time they blandly advance "original cost" as a rate base.

Again, this beam in the author's eye blinds him to the fact that the advocacy of an "original cost" rate base represents reasoning just as "circular" and just as "vicious" as that which supports any other cost or sacrifice as a measure of the property or property right of the entrepreneur in a private enterprise system of economy. Lawyers, whose very profession deals with the interpretation and application of the established legal principles governing property or property rights, would most certainly be "unimpressed" when the "vicious circle" argument was offered in support of an "original cost" rate base. Most lawyers will quickly reject a theory which cannot be reconciled with known facts, though some academic economists seem to delight in ignoring any actual facts which run counter to a pet theory. The author, himself, recognizes this.

Page 8:

> It is a striking commentary on the tendency of the *social sciences to become overstratified*, that the *academic economists*, who have long claimed the theory of value as their central theme *have given so little attention to the practical problems* of appraisal that are constantly arising *in business and in law.* For the most part, their interest has centered in the *forces that are supposed to determine* the prices *actually* fixed by the process of "higgling and bargaining" on the market place. *Only a few of them have been concerned* with the *way* in which *professional appraisers determine a fair selling price* in a business negotiation, in the *way in which accountants value assets* for balance sheet purposes and income tax statements, or in the *way in which courts and commissioners value property* for legal *purposes.* (emphasis supplied)

Suppose, therefore, we descend from this "overstratified" atmosphere occupied by the academic economist who advances the "vicious circle" argument in support of an "original cost" determination of value, and examine some of the actual facts as they exist in a private enterprise economy, which, although ignored by the economists, would cause lawyers, accountants, courts, and businessmen to reject such an argument as invalid.

Everyone concerned with the everyday problems of business knows that every single acquisition of an earning concern throughout the history of our capitalistic or free enterprise system of American economy recognized the fact that the actual property or property right acquired was the right to the future earning power of such concern. Every purchase price represented an agreed estimate, as between the seller and the purchaser, of the present value of such future earning power. Under the American system of economy both buyer and seller knew that the actual value would be determined by the wisdom and efficiency with which the property was used, and that it would be affected by many economic factors, the influence or impact of which could at the moment only be a matter of estimate. Each knew that the purchase price did not represent an actual measure of value, that the transaction itself evidenced the seller's opinion that the actual value was less than the price received, and the buyer's opinion that the actual value was greater than the

price paid or the sacrifice made to obtain possession. If the purchase price actually established a "legal yardstick" of value, they would both be wrong. Under a private enterprise system of economy, value is not established by cost, original or actual, but instead by use or utility, and the opportunity offered to the individual to profit by a wise use of cost has been the incentive to the growth and development of our whole economy. These are economic facts as they actually exist in an established economic system.

The circular reasoning of which the author complains is not required in support of any rate base which recognizes these established economic facts. Circular reasoning becomes necessary only when a peculiar economic theory is advanced which would ignore these established facts and enthrone cost or sacrifice, either original or actual, as a legal limit to the benefits of possession, or of value.

The circuitous reasoning which supports such a theory evidently becomes "vicious" only when, and solely because, it guarantees to the overly optimistic purchaser the realization of his hopes, and relieves him of the penalties which would accrue from his own bad judgment, by requiring the consumer to pay a return on this unreasonable purchase price. This same circular reasoning, which is called "vicious" when used to support a purchase price, is freely indulged in by the author and other proponents of "original cost" as a rate base. These "original cost" proponents object strenuously to a theory which would prove that the purchase price of an earning entity represents actual value by establishing such price as an earning base, maintaining that the reasoning behind such a theory is "vicious." Yet these very same proponents blandly propose to avoid such vicious reasoning by adopting a theory which would prove that "original cost" is a measure of actual value by establishing this cost as a legal limit to such value.

Most lawyers, accountants, and businessmen would question the mental gymnastics by which this same "circular reasoning" now becomes "virtuous" instead of "vicious." They would naturally wonder how a theory which denies to the private owner, and confiscates for the public or for society, all rewards accruing from sound judgment, individual initiative, enterprise, etc., could be any less vicious than one which burdens the public with penalties which might arise from poor judgment or over-optimistic forecasts. Lawyers would quickly recognize the fact that such "reasoning" would not constitute a proper judicial approach to equity as between the interest of such private owners and the interest of the public. Lawyers know that equity cannot be served by the mere transfer of an inequity from one party at interest to the other party. They know that true equity requires that the inequity between the parties be removed, not merely *transferred*. The author seems much surprised that lawyers, accountants, and businessmen cannot agree with his reasoning; but his surprise is much like that of the little old lady, who, while watching the troops pass in review, suddenly discovers that they are "all out of step but my son, John."

We have been discussing statements of Professor Bonbright, the author. Let us now return to the statements of Professor Bonbright, the witness, as set out in the testimony carried in the ACCOUNTING REVIEW. You will remember that he qualified his endorsement of "original cost" as a rate base by prefacing his statement with the modifying term, "broadly speaking." Suppose we examine the explanatory testimony which follows this endorsement in an effort to determine the significance and extent of this qualification to outright approval.

To get the full significance of this explanatory testimony it must be remembered that "original cost," as an accounting or regulatory term, represents a mere subdivision of the actual cost or bona fide investment; that all actual costs, in excess of "original cost," or all that part of the bona fide investment which is excluded from "original cost," is segregated in the subaccount 100.5; and that an "original cost" rate base excludes all these valid costs, or all that part of the bona fide investment segregated in Account 100.5, from the earning base, or from the value of the property right dedicated by the private owner to public service. It must also be remembered that the distinguishing difference between such "original cost" rate base and a "prudent investment" rate base is the fact that a "prudent investment" rate base would include all those costs (though segregated in Account 100.5) which were prudently incurred, as a part of the earning base, or as a part of the present value of the property right of the owners dedicated to public service. With these facts in mind, let us examine a question and answer, on page 442 (ACCOUNTING REVIEW) which read as follows;

Question

To the extent that the Company's present book figures *are found to exceed original cost* do you believe *that excess should be included in the rate base, in whole or in part?*

Answer

No—with *one* qualification. If *any part* of the excess could be *shown to constitute a valid item* in the acquisition adjustment account, there would then arise a serious question as to the *proper treatment* of such an item for rate making purposes. However, so far as I can judge from the relevant portions of the record in this case, *any excess* in the Company's book figures *over the* original cost of its utility properties *is not of* this character. (emphasis supplied)

The answer of the witness indicates he would give serious consideration to all book figures which could not be properly classified in Account 107; but the last sentence proves that he is also excluding from consideration costs which were classified by this company in Account 100.5. This reconciles his answer with his approval of an "original cost" rate base. When asked if any book costs in excess of "original cost" should be included in the rate base the witness answers, "No," but adds, "with one qualification." Again we find a qualification, and a most peculiar one for an admitted proponent of "original cost" as a rate base. You will note that he qualifies as to that part of these costs segregated in Account 100.5 which "could be shown to constitute a valid item in the acquisition adjustment account." What does the witness mean by "valid"? Does he refuse to recognize the actual facts that all costs segregated in Account 100.5 are valid costs, that they all are always an actual part of the bona fide investment, and, that all invalid costs, or fictitious items, are always excluded from Account 100.5 and segregated in Account 107? This is all made clear in the system of accounts which provides for this segregation and in the formal opinion, No. 120 of the Federal Power Commission, a part of which was quoted at the beginning of this discussion. Under a true concept of the term "valid," and, presuming the witness intends "serious considerations" to mean "consideration as a rate base item," the answer can be literally interpreted as "No, but Yes."

Let us go a little further into this testimony and see whether we can find a statement wherein the witness definitely commits himself. In the very next question and answer he seems to commit himself to a "prudent investment" rate base, which, as we have explained, is quite different from an "original cost" rate base.

Question

In supporting the use of original cost *as the primary measure* of the Company's rate base, *are you accepting the so-called prudent investment principle* of rate making?

Answer

Yes, although, in this instance I doubt whether the acceptance of a rate base derived from original cost is consistent with the alternative "fair value" principle as construed under the tradition of Smythe v. Ames. (emphasis supplied)

The qualification implied in the above answer appears to apply solely to the specific case in question and this would seem to leave the witness definitely committed to the prudent investment principle. Now such a commitment just simply cannot be reconciled with even a qualified endorsement of an "original cost" rate base. The fence between these two rate base theories is much too high to be successfully straddled by adroit and clever arguments. When you add to an "original cost" base all costs in excess thereof which were prudently incurred, you do not have an "original cost" rate base; instead, you have a "prudent investment" rate base. The distinguishing difference between the two theories is the fact that a "prudent investment" rate base includes all prudent costs segregated in Account 100.5. Does the witness mean to imply that all costs incurred in the acquisition of an earning entity which are in excess of that properly assignable to "original cost" are "imprudent costs"? A statement, on page 444, seems to indicate that this is the very concept that the witness would use in his application of the prudent investment principle.

Now, I conclude that, despite all attempts to ridicule an original cost rate base by calling it "aboriginal cost," or other funny names, *such a rate base is required* as a general rule *by the logic of the prudent investment principle.* (emphasis supplied)

Although this statement is qualified by the phrase "as a general rule," it expresses the opinion of the witness that the "logic of the prudent investment principle" would indict all actual costs in excess of "original cost" as imprudent expenditures, which, as such, should be excluded from a prudent investment rate base. In advancing such an interpretation of prudent investment principles the witness resorts to a most peculiar definition and use of the adjectives "prudent" and "imprudent." *Webster's Unabridged Dictionary* provides the following definition of these well-known and commonly used adjectives.

Prudent

Exercising sound judgment; wisely thoughtful; careful; judicious.

Imprudent

Not careful; lacking discretion or a due regard for consequences; heedless; careless; foolhardy, illadvised, illjudged, improvident, incautious, indiscreet, injudicious, unthinking.

That a true and proper concept of the prudent investment principle recognizes and reflects the above definition of these adjectives is evidenced by the definition and the explanation of these principles as set out in the opinion of the late Justice Brandeis in the Southwestern Bell Telephone Case.

I concur in the judgment of reversal, but I do so on the grounds that the order of the State Commission prevents the utility from earning a fair return on the *amount prudently invested in it.* (emphasis supplied)

In a footnote to this opinion he defines the term "prudent investment" as follows:

The term "prudent investment" is *not used in a critical sense.* There *should not be excluded,* from the findings of the base, investments which, *under ordinary circumstances,* would be deemed reasonable. The term is applied for the purpose of excluding what might be found to be *dishonest* or *obviously wasteful* or *imprudent expenditures. Every investment may be assumed to have been made in the exercise of reasonable judgment unless the contrary is shown.* (emphasis supplied)

The last two sentences of the above definition make it clear that Justice Brandeis would never exclude any part of the actual cost of acquisition from his prudent investment rate base until it had been definitely shown that such part consisted of "obviously wasteful or imprudent expenditures." You will note that, in the last sentence, he requires proof of imprudency as a prerequisite to such exclusion. It must be remembered that under the definitions provided by the Uniform System of Accounts and by the official opinions of the Federal Power Commission, all costs segregated in Account 100.5 are a valid part of the "bona fide investment" in utility properties. In view of these facts how can the witness justify a statement that an "original cost" rate base "is required as a general rule by the logic of the prudent investment principle"? Such a rate base actually excludes all costs segregated in Account 100.5, regardless of the circumstances under which they were incurred.

By this statement the witness actually impeaches his own opinion, offered in a public report fifteen years earlier. Professor Bonbright was a member of a commission appointed in 1930 for the revision of the Public Service laws of the State of New York, and as a member of this commission he prepared and filed a minority report advocating the adoption of the prudent investment method of rate regulation. In this report he presented an explanation of his conception of the meaning of the adjective "prudent" and of the term "prudent investment."

> We have been informed by various persons in touch with the public utility companies that one of the most serious *misgivings* entertained by these companies has to do with the *implications of the adjective "prudent,"* in the prudent investment formula. If *only* such capital contributions will be allowed to earn a return as have been "prudently" invested in public service, fear is expressed that *hindsight*, rather than mere *foresight*, will be used by a commission and that it will find certain expenditures to have been *imprudently made* simply because *actual experiences* prove that they were *mistakenly incurred.*
>
> If the "prudent investment" standards were indeed to result in the application *of hindsight*, rather than foresight, and if companies were to be *penalized* for construction expenditures which, *however reasonable at the time*, turned out to be mistaken, we should indeed be quite *ready to concede the soundness of the objections* just raised. *No such construction of the term "prudent investment,"* however, *is in the minds of those who support this* principle. The adjective "prudent" has been used simply in order to *indicate* that the rate base *must not include fraudulent, extravagant and unreasonable outlays.* (emphasis supplied)

The foregoing definition and explanation of the term prudent investment and of the adjective prudent was offered by this very same witness, fifteen years earlier, as his sincere opinion of the actual meaning of these terms. Under this concept, which forbids the use of hindsight, all costs segregated in Account 100.5 which could not be proven as fraudulent, wasteful, or imprudent, under the circumstances and conditions that existed at the time incurred, would be included in the rate base. Yet, fifteen years later, the witness states, in effect, that it is now his opinion that that "as a general rule" the term prudent investment implies a blanket indictment of all costs segregated in Account 100.5 as being imprudent.

It must be remembered that the costs which are subjected to a blanket indictment by this witness as fraudulent, wasteful, extravagant, etc., are the actual arms-length costs of going concerns, which are in excess of the mere cost to some former owner to install the component parts integrated to form the operating concern. They represent the entire cost incurred in the recognition of intangible attributes, built into, or acquired by such former owner, and inherent in the "going concern" at the date acquired. An indictment of all such costs as imprudent must rest

on an assumption that no prudent purchaser would have ever paid more for an earning utility property than the combined "original cost" of the component parts of the earning entity. Such an assumption is too absurd to be entertained by reasonable minds.

Prudent investors in utility properties, unlike some academic economists, must recognize facts as they actually exist. Their transactions involve an exchange of values or economic benefits, created under and protected by an established economic system; therefore, any detriment arising from imprudency represents a penalty which cannot be avoided by fanciful flight into the realm of abstract theory. Their losses must be paid in cash, not in clever arguments. The witness, as the author of *Valuation of Property*, admits and emphasizes the fact that the value of an earning concern cannot be measured in a private enterprise economy by the cost of the component parts. He complains, as we have shown, as to the lack of support throughout the past on the part of lawyers, accountants, courts, and commissions of a restriction of utility values to such costs. He admits that values or property rights in excess of such costs were recognized by courts, commissions, and investors throughout the past, and that transfers were made with legal approval at prices which recognized and attempted to measure such value. He even admits that the "law of the land" recognized and protected such value as a property or property right of the owners.

Page 1078 (*Valuation of Property*):

As Governor of New York and as President of the United States, Franklin D. Roosevelt has led the criticism of the *traditional theories of regulation*. Since his election to the Presidency every major program of utility reform has involved an attempt somehow to *escape the consequences* of the court-made "*law of the land*," under which the fairness of rates is made to hinge on the ability of a company to earn a "reasonable return" on the *current "value" of its properties*. (emphasis supplied)

Here he admits that values in excess of "original cost" were recognized and established as legal property or property rights of the private owners. Were those purchasers imprudent who recognized this established legal fact in their purchase prices? Were the courts and commissions also imprudent? Public power authorities are currently acquiring utility properties at prices which are in excess of "original cost," in some instances to the extent of 57 per cent. Are the public officials imprudent who approve these expenditures, and do the expenditures represent a "fraudulent," "extravagant," and "imprudent" waste of public funds?

How can the witness reconcile his peculiar theory with the facts as they actually exist within the legal framework of our established economic system? As is frequently the case with a pure theorist or with a purely academic economist who has little patience with things as they are, but is concerned solely with things as they ought to be, he does not even undertake such a reconciliation. He merely adopts still another far-fetched assumption as a substitute for a well-known fact, and goes merrily on his way. This becomes readily apparent when we carefully analyze the explanatory testimony offered by this witness in support of his contention that "such a rate base (original cost) is required as a general rule by the logic of the prudent investment principle."

We would naturally assume that the witness in advancing this contention would be compelled to recognize the basic fact that the owner's "investment" in utility property consists of, and is measured by, the actual arms-length sacrifice made by such owner to obtain possession of the property; that the term "prudent investment" and the adjective "prudent" relate to the actual cost of the property dedicated

to public service. You will find, however, that the witness indicts this actual fact as a "guise," and adopts still another absurd assumption as a basis for his arguments.

Page 442 (ACCOUNTING REVIEW):

> The "prudent investment" standard on the other hand, uses as its criterion ***not the value but rather the cost of the property devoted to the public service*** so long as this cost may be deemed to have been ***prudently incurred.*** (emphasis supplied)

Under such a definition we naturally wonder how "original cost" could be advanced as a ceiling to costs prudently incurred. Let us look at the beginning of the next paragraph.

> ***Ordinarily, the relevant cost is the cost of constructing the properties*** used and useful in the public service, and ***this cost***, save in a somewhat unusual case, ***means the same as the cost of the property when first devoted to public service*** so long as ***this cost*** may be deemed to have been ***prudently incurred.*** (emphasis supplied)

So here we have it. He proves that "prudent cost" is "original cost" by merely assuming that there is no valid cost except "original cost"; that cost does not mean "actual cost" but instead means "original cost"; that "prudent investment" does not mean that part of the actual investment which was prudently incurred, but instead simply means "prudent original cost." Facts are not so easily erased. If they were, it would be perfectly easy to prove that day is night by merely assuming that the sun failed to rise.

Page 443:

> The very ***nature of rate regulation precludes*** the adoption of the ***transfer price*** of a utility property, presented ***under the guise of actual cost to the present accounting company***, as a proper measure of the rate base. (emphasis supplied)

Again the witness assumes that regulatory power, which is provided in lieu of or as a substitute for competition carries with it the authority to erase economic facts and abolish economic factors. In the above statement he implies, if he does not actually assert, that it is a misrepresentation to present the transfer price or actual arms-length cost, as "actual cost to the accounting company." The fact which the witness would like to ignore is that "actual cost" always means the sacrifice made to acquire a property or property right and, under our established economic system, this sacrifice can never be measured by the ancient sacrifice of a prior owner to acquire rights he no longer possesses. The investment of an owner in a car or in transportation does not consist of wages paid to rubber hunters in Indo-China, payrolls at Detroit, amounts paid for raw material by the manufacturer, or a combination of any of these costs of the component parts assembled to form the car. The investment of the owner in such car is measured solely by the "transfer price" whereby he obtained possession. By the same rules, and for the same reasons, the investment of the owners of utility property in such property, or the actual cost of such property to these owners, can be nothing but the transfer price.

We have seen that the witness would measure the property right of the present owner by the credit position of the original owner, or by the funds advanced by such original owner to install the component parts of the going concern. This, together with his refusal to recognize cost in excess of "original cost" as valid cost or as a part of the bona fide investment, would seem to close the door upon all costs segregated in Account 100.5 as a part of the rate base. You will notice, however, his frequent use of such qualifying terms as "broadly speaking," "as a general rule," "ordinarily," and "with one qualification," all of which indicate that there are, or at least could be, certain costs in excess of "original cost" which he would approve as "prudent costs." Let us see whether we can determine his reason for leaving this "closed door" slightly ajar.

Page 444:

Do you mean to imply that under the "prudent investment" principle, ***no account should ever be taken of a purchase in excess of original cost?*** (emphasis supplied)

You will remember that the witness had been asked practically the same question previously. In the previous question he was asked whether any book costs in excess of "original cost" should be included in the rate base, in whole or in part. His answer to this question was "No, with one qualification." In the question just posed he is asked whether he means to imply that these costs should not be considered. This time the first sentence in his answer reads:

No, I do not.

Although the witness follows this statement with explanatory testimony, his flat denial of any implication that these costs should not be considered seems peculiar. Suppose we continue our search for an unqualified opinion by analyzing the explanatory testimony offered in support of this flat denial. The first two sentences of this testimony read as follows:

My preceding statement in support of original cost as the measure of the rate base is subject to *one* important qualification or exception. This exception applies to situations where a utility property has been acquired by new owners as a ***necessary step*** in improving public service by making ***a better, more efficient unit through the combination of existing utility properties.*** (emphasis supplied)

What a peculiar exception to the outright approval of an "original cost" rate base. As we have pointed out, the distinguishing feature of an "original cost" rate base is the exclusion from such base of all costs which recognize the existence of intangible attributes in the earning entity. The last sentence in the statement just quoted recognizes, and approves, the conception of use, or utility, or a wise use of cost, as a contributing factor to value, and thus to property or property rights. If the witness is sincere in this statement, he is of course a "prudent investment" advocate, and not, as he claims, an advocate of "original cost," even "broadly speaking." This exception also completely nullifies his previous contention that the adjective "prudent" and the term "prudent investment" relate only to "original cost," for here he applies his "prudency test" to the transfer price. He continues with his explanation of this "test," which he would apply, not to "original cost," but to transfer price, with the following statement:

In such a case, if the new owner was ***compelled to pay more than original cost*** in order to accomplish this desirable objective, and if the ***public benefit*** resulting from the acquisition of the property ***is more than enough to offset the public burden*** of the higher ***rate base,*** the inclusion in the rate base of the necessary purchase price seems to me to be in harmony with the "prudent investment" principle. (emphasis supplied)

The witness must surely know that all costs segregated in Account 100.5 are arms-length costs, and that therefore it represented the minimum amount which would have influenced the seller to relinquish his property rights. The witness must also know that actual benefits flowing from the acquisition and integration of isolated utility properties, both to the owner and to the public, have been the predominant influencing factor in the growth and development of the utility industry. He must also know that no successful operating property has ever been transferred at a price which represented a mere return to the owner of the depreciated cost to install its component parts. If integration could be effected only through acquisition, and if acquisition required the surrender of these arms-length costs, why should the property right of the present owner ever be limited to "original cost"? The witness insists that "as a general rule" "original cost" should be the rate base; but

under the explanatory testimony offered by the witness, an "original cost" rate base would actually represent a rare exception to a general rule that actual cost represented a proper rate base.

We have noticed in the testimony that the witness would not recognize values arising from intangible attributes, inherent in the earning entity at the date of acquisition, as a property or property right of the owner, insisting that the only right subject to transfer is the "original" owner's right to a fair return on the cost, installed, of the property. This is conclusive proof that he does not recognize intangible attributes, created or acquired as a property or property right of the owner. Isn't this a rather strange concept in view of the statement, just quoted, that he would recognize as a part of the rate base or as a property right, a premium in excess of "original cost" paid for the purpose of creating such intangibles as "more efficiency," "cheaper and better service," or, as he says, a "socially desirable objective." If the new owner can create, own, and earn on, an intangible, why does not the former owner have the right to own and benefit from intangibles created or acquired during his possession of the property? How can we deny the existence of intangible values as property rights, and at the same time admit that they can be created as such? Remember, an "original cost" rate base denies the validity of all intangible values as the property rights of private owners.

While the witness stipulates the conditions under which he would admit these "excess" costs to the rate base, he still implies that he sees such costs as an excess, or unwarranted "burden on the rate payers." This implication is apparent in a statement on page 444.

> Even here, however, in my opinion, the excess should be ***amortized over a reasonable period*** of time instead of being allowed to ***stand as a perpetual burden on the rate payer.*** (emphasis supplied)

Does the witness consider the dedication of property to public service the "burdening" of the public with such property? Does the property or property right which he admits provides benefits to the public represent merely an unjust burden placed on the public which should be quickly removed? Doesn't the witness recognize the fact that properties are dedicated to public service in perpetuity, and that the dedicator loses the right to withdraw such property at his option? Isn't he confusing amortization provisions for intangibles with the depreciation provisions for tangible property? He must surely know that the depreciation provisions for tangible property do not represent withdrawals of such property from the rate base or from public service. They obviously represent exactly the opposite in principle, for their very purpose is to provide the means for the preservation and continuation of the whole property in the public service. The witness, when he approves these costs as a part of the prudent rate base, must also approve a return of, as well as a return on, such cost. This means that the rapid amortization which he advocates must be an amortization through operating costs or, in other words, a recovery of such costs through charges for service during the amortization period. Doesn't the witness know that his plan does not lift a "burden" but that instead it merely shifts a "burden"? It would actually mean a subsidy by current rate payers to future rate payers, and as such would violate the fundamental principles of correct regulatory practices. Correct regulatory practices are based on the principles of cost accounting and these principles require that costs be assigned to that period or that product which uses up or exhausts the benefits acquired through such cost. The very nature of the benefits arising from integration precludes any argument for a "quick amortization" of the "cost of integration" by current rate payers.

In a dedication of property to public service, the owner surrenders his right to charge what the service is worth or "what the traffic will bear," in exchange for the right to a fair return on his property and the preservation and continuation of his property in public service. Under a proper conception of, and respect for, the rights and obligations which arise between the owner and the public from a dedication of property to public service, it is clear that integration costs, fully supported by integration benefits, have all the characteristics of a permanent asset. Depreciation and amortization provisions are applicable only to the impermanent component parts of the property as a whole which are used up, expire, or become useless through the passage of time or the wear and tear of operations. Integration benefits are not used up or exhausted by the wear and tear of operations; nor do they expire with the mere passing of time. They have the same degree of permanency as the situation or condition out of which they arose or by which they were created; the same degree of permanency as that of the integrated system.

The "useful life" of integration benefits means that period of time during which we may expect continued economies or savings from the elimination of duplicate facilities and the diversity of demand that is made possible by integration. It would be difficult to imagine a time when "disintegration" would be voluntarily effected or a time when it would be ordered by regulatory authority. You might imagine a hypothetical situation, such as a development in the art of power generation, which would make it cheaper to provide local generation and eliminate the need for transmission and integration between distribution systems. If, however, disintegration should become economical by reason of such a hypothetical development as this, it would be perfectly proper to amortize the remaining cost of integration over those future periods which would receive the benefits of this new innovation or this more economical service. Under this hypothesis it would also be entirely proper to amortize the remaining costs of the abandoned transmission lines in the same way. There is no logic in an argument that charges for service to current rate payers should be burdened with the entire costs of integration in order to relieve the rate base of future rate payers of a part of the actual cost of service to them. It would be just as logical to provide for the "quick amortization" of the entire rate base in order that this rate base not be ***"allowed to stand as a perpetual burden on the rate payers."***

The witness continues by outlining the test he would apply to the "acquisition adjustment item" before admitting such cost to the rate base.

Page 444:

> There are at least three prerequisites of the allowance of the excess price in order to satisfy reasonable requirements that the acquisition adjustment item should be included in the rate base. There must be adequate evidence:
>
> first, that the present owner was obliged to pay this excess price in order to get the property (This calls for a price on an arms-length transaction basis);
>
> second, that the price was paid in cash, or if not in cash, then in property or securities valued strictly at their cash value;
>
> and third, that the payment of the excess price was warranted from the public standpoint, and not merely from the standpoint of a good business transaction as between buyer and seller.

The witness must surely know that all costs segregated in the "Acquisition Adjustment" account, or in Account 100.5, meet the first and second requirement. The very definitions and restrictions provided for Account 100.5 require that costs segregated therein meet these two requirements. Only the third requisite, therefore, can have any meaning or significance in this discussion.

The third requisite merely leaves the door wide open for a "social" test rather

than a legal one, especially if the witness construes the word "public" to mean only the "rate paying public" to the exclusion of the "owning" public. We have had considerable evidence throughout this testimony that the social angle would receive all the emphasis in any review and determination by this witness of the property or property right of the private owner of property dedicated to public service. This significant feature of the testimony is perfectly apparent when you remember that, in substance, he has testified that;

1. Broadly speaking, original cost is the proper rate base.
2. Ordinarily prudent investment means prudent original cost; the cost to which the adjective prudent relates is ordinarily original cost.
3. The fallacy of a purchase price or actual cost rate base should be apparent to anyone.
4. The only right that the original owner has to convey, or the only property or property right of the owner of utility property, is the right to a fair return on the original cost to install the component parts of the going concern.
5. The very nature of regulation precludes the recognition of the purchase price or actual cost as a rate base.
6. Only in a somewhat unusual case could any costs in excess of original cost be a proper part of the rate base.
7. These unusual cases require proof that the excess price was warranted from the public standpoint, not merely by good business judgment.
8. Even in these unusual cases these costs must be subjected to a quick amortization.

The economic philosophy reflected in the above summation, if adopted as a proper regulatory concept and then administered and interpreted with the emphasis on its social possibilities, could effect the complete socialization of the entire utility industry. We have shown that the imposition of an "original cost" rate base has the effect of socializing utility properties by relegating the ownership to the position of a mere creditor to a publicly owned property. Utility properties can also be socialized through purchases by public power authorities. You will notice that his testimony, as we have interpreted it in summations 1 to 5 inclusive, seems to close the door to costs in excess of "original cost" as a proper rate base item. Can it be significant that he opens the door just wide enough, as set out in our summations 6 and 7, to admit within his concept of prudent and proper costs such excess costs as are found in the purchase price of public power authorities? Remember, that through an overemphasis of the "social possibilities," these costs, in spite of the implications of summations 1 to 5, might be approved as "warranted from the public standpoint," the public's interest being especially served through public ownership.

Of course the present private owners of most utility systems can truthfully argue that much, if not all, of the costs in excess of "original cost" now in their plant accounts arose in and through the same identical kind of transactions, and that benefits flowing to the public from integration and interconnection fully support these costs which were incurred in perfecting the existing integrated and interconnected system. The witness undertakes to close this door to such costs in the books of the private owner by resorting to the economic "principle" set out in summation No. 8. Here he provides a springboard for the argument, used so frequently by the Federal Power Commission, that even though these costs were prudent when incurred, they should have been subjected to "quick amortization" and that therefore they no longer constitute a "prudent" item in a current rate base.

RECENT BRITISH ACCOUNTING DEVELOPMENTS

F. Sewell Bray

British accountancy as an organized profession is still relatively young when thought of in relation to law and medicine; nevertheless, it has been called upon to shoulder a wide range of important practical duties within a comparatively short space of time. A clear account of the nature of those duties, which takes us up to the beginning of 1938, is to be found in Sir Laurence Halsey's Dickinson lecture on *The Position of the Public Accountant in Relation to Business and Government in Great Britain.*[1]

This insistent practical urge for a time overshadowed theoretical developments, a situation which provoked a critic to declare that accountants were insensitive to the need for sustained academic study and research. It is probable that a certain want of contact with the universities had something to do with this apparent neglect, a want of contact for which the profession was not wholly answerable.[2] Be this as it may, criticism was not without effect. Early in 1937 the Society of Incorporated Accountants started a committee "for the encouragement of research into all matters connected with the work of the professional accountant." The emphasis was very much on práctice, for it was said that "one of the particular objects of the Research Committee was the publication of booklets in the form of reports on matters of practical importance to the accountant."[3] The first work of this committee was published under the title of *Standard Practice in Auditing.*

Not very long after the setting up of the Society's Research Committee, the Accounting Research Association was formed, this time under the stimulus of academic influence. But, although it published a number of useful memoranda, it was prevented from making real headway by the cessation of its activities soon after the outbreak of war.

With the coming of a second world war there has been a certain reforming restlessness in social affairs, a restlessness which has not been without its mark on accounts. It has been possible to detect a new spirit creeping into the statement of accounts; the accounting art itself has become discernible as an instrument of truth in the field of economic enquiry. Society has begun to expect published financial accounts to serve all kinds of purposes, and it has asked of them, as a matter of prime importance, such a disclosure of information as will give a clear and orderly picture, which can be readily assimilated and understood, of the working of business enterprise. Such a climate has turned attention to company legislation, and, coming at a time of intense pressure on technique, has set the profession thinking.

In England the Institute of Chartered Accountants has formed a Taxation and Financial Relations Committee, which has initiated subjects of accounting principle for the consideration of the Council. One result of this has been the publication by the Council of the Institute of recommendations on accounting principles, the first of which, dealing with Tax Reserve Certificates, appeared in December, 1942, and the latest, on the "thorny" question of the valuation of stock in trade, was pub-

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[1] *Dickinson Lectures in Accounting*, Harvard University Press, 1943.

[2] This situation has recently been remedied.

[3] Mr. Richard A. Witty in his Preface to *Standard Practice in Auditing*.

lished in June, 1945. The importance attached to the principle of adequate disclosure in relation to company accounts may be seen from those recommendations which deal with the treatment of taxation in accounts, the inclusion in accounts of proposed profit appropriations, reserves and provisions, disclosure of the financial position and results of subsidiary companies in the accounts of holding companies, form a balance sheet and profit and loss account, and depreciation of fixed assets. Thus it is recommended *inter alia* that the charge for income tax and the charge for national defense contribution or excess profits tax should be stated in the accounts, and that the charge for income tax should be based on the profits earned during the period covered by the accounts, a recommendation which arises out of the preceding-year basis of assessment of the United Kingdom income tax. It is recommended that the basis of the charge for income tax should be disclosed, and there is a reference to the fact that "taxation charges may be affected by losses in the current period, deficiencies brought forward or adjustments of taxation in respect of previous periods, the effect of which, if material, should be disclosed.[4] This recommendation goes on to say that "any provision made in excess of the amount required to cover the estimated future liability on profits earned to date should, if material, be similarly disclosed.[5]

In March, 1943, it was recommended that "provision be made in the books and in the annual accounts for proposed profit appropriations, those subject to confirmation by shareholders being so described. Provision for dividends should be shown as a separate item in the balance sheet.[6] In October of the same year there was a recommendation that a "distinction should be made between reserves which are free and those in the nature of provisions for specific requirements,"[7] the latter being preferably described as "Provisions." In this recommendation there is a denotation of the term "reserve" as "amounts set aside out of profits and other surpluses which are not designed to meet any liability, contingency, commitment or diminution in value of assets known to exist as at the date of the balance sheet";[8] such reserves to be dislcosed in the balance sheet. It is also indicated that the term "Reserve Fund" should only be used "where a reserve is specifically represented by readily realizable and earmarked assets.[9] The term "provision" is denoted as "amounts set aside out of profits or other surpluses to meet (1) specific requirements the amounts whereof can be estimated closely, and (2) specific commitments, known contingencies and diminution in values of assets existing as at the date of the balance sheet where the amounts involved cannot be determined with substantial accuracy."[10] The provisions referred to at (2) "should be disclosed in the balance sheet under one or more appropriate headings."[11] There is also a direction that capital and other reserves not normally regarded as available for distribution as dividends should be separated from those of a revenue nature and that as a general rule "where reserves and provisions are created or increased, the amounts involved, if material, and the sources from which they have been created or increased, should be disclosed in the accounts"[12] except in regard to provisions the disclosure of which would be detrimental to the interests of a company. In all cases

[4] *Recommendations on Accounting Principles*, The Institute of Chartered Accountants in England and Wales (Gee & Co., Ltd., 1944), p. 10.
[5] *Ibid.*
[6] *Ibid.*, p. 12.

[7] *Ibid.*, p. 13.
[8] *Ibid.*
[9] *Ibid.*
[10] *Ibid.*
[11] *Ibid.*, p. 14.
[12] *Ibid.*

it is recommended that "the utilization of reserves, and of provisions proved to have been redundant, should be disclosed in the accounts."[13]

The principles recommended for the consolidation of balance sheets and profit and loss accounts will be familiar to American accountants, but there is an interesting direction that "every consolidated statement should indicate: (a) the nature and measure of control adopted as a basis for the inclusion of subsidiary undertakings, (b) the reasons for the non-inclusion of any subsidiary undertakings which would normally be included on the basis adopted for the group, (c) the procedure adopted in cases where the accounts of subsidiary undertakings are not made up to the same date as the accounts of the holding company, (d) in the case of subsidiary companies operating overseas, if relatively important, the basis taken for the conversion of foreign currencies as affecting assets, liabilities and earnings."[14]

In July, 1944, the Council of the Institute issued its recommendation on the form of balance sheet and profit and loss account, a recommendation which approved the general principles of grouping. It mentioned in direct reference to the balance sheet that additional groups might be necessary to show the aggregate liabilities and assets subject to exchange or other restrictions, special funds and other special items, such as deferred revenue expenditure. On the subject of fixed assets it recommended that these should be shown on the balance sheet at original cost with a stated deduction for accumulated depreciation. A note to the balance sheet grouping for current assets mentioned that debts of material amount not due until after the lapse of one year from the date of the balance sheet should be separately grouped and suitably described.

[13] *Ibid.*
[14] *Ibid.*, pp. 16–17.

Two of the references to the form of the profit and loss account are of such importance that they deserve to be quoted in detail. Thus it is recommended that "The profit and loss account should be presented in such a form as to give a clear disclosure of the results of the period and the amount available for appropriation." Secondly it is noted that "such a disclosure implies substantial uniformity in the accounting principles applied as between successive accounting periods; any change of a material nature, such as a variation in the basis of stock valuation or in the method of providing for depreciation or taxation, should be disclosed if its effect distorts the results. The account should disclose any material respects in which it includes extraneous or non-recurrent items or those of an exceptional nature, and should also refer to the omission of any item relative to, or the inclusion of any item not relative to, the results of the period."[15] We should not wish to pass from this recommendation without mentioning one very interesting suggestion, on the subject of disclosure of information, which relates the directors' report to the accounts. Thus it is recommended that "If directors of a company desire to disclose in their report information which, but for its inclusion in the report, would be required to be disclosed in the accounts, the relative paragraphs in the report should be clearly distinguished from the remainder of the report and specifically referred to in the accounts.[16]

For the rest, we should just notice two remaining recommendations; the one relating to depreciation of fixed assets which approved the straight-line basis as a method of cost allocation for assets such as Freehold Buildings, Plant and Machinery, Tools and Equipment, Ships and Transport Vehicles, which are subject to

[15] *Ibid.*, p. 22.
[16] *Ibid.*, p. 24.

depreciation by reason of their employment in a business; the other dealing with the valuation of Stock-in-Trade which supported the conventional rule of valuation at the lower of cost or market value, a recommendation which has not altogether satisfied the economic implications underlying stock valuation.

While the Council of the Institute of Chartered Accountants was in the process of issuing its recommendations on accounting principles, the Research Committee of the Society of Incorporated Accountants was very far from inactive, and in June, 1944, it came out with a second publication, *Design of Accounts*,[17] a book which *The Accountant* referred to as an important landmark in the history of accounting development. In this work a marked emphasis was placed on accounts as evidence of the effectiveness of operations. In the first section, which set out the principles of design, it said that "It is the duty of directors to render a plain and intelligible account of their conduct of a company's business, in order that the relative contributions to the 'net income' made by the three elements concerned in the running of industry—ownership, labor, and management— may be discerned; not to mention that such documents supply information to economists and others pursuing truth for its own sake, and to a government which is required to have increasing regard to the equilibrium of the industrial structure of the nation if difficult social problems are to be solved."[18] In this section there was a discussion on the elements of uniformity, terminology, significant groupings in balance sheets and revenue accounts, published accounts, narrative accounts, uniformity in accounts of holding companies, directors' responsibility for accounts, and at the conclusion a summary of the principles underlying the design of financial statements.

A second section, on the Interpretation of Accounts, dealt with internal accounts in relation to management, the equilibrium of a business as evidenced by accounts, departmental classifications, and accounting ratios. Included in the contents were specimen forms of published company accounts, suggestions for the statement of accounts in narrative form, twenty-four specimen forms of account for specific undertakings, and recommended forms for the accounts of executors and trustees.

One paragraph in the book which deserves to be emphasized discussed the advantages to be gained from a minimum of uniformity in design. It indicated that "In the first place such uniformity would presumably tend to raise the general standard of design in the accounts, both published and unpublished, of firms in all industries; and this might carry with it a general improvement in accounting systems, to the benefit of individual enterprises and to the community at large. Secondly, as interpretation becomes more penetrating, the general standard of criticism applied to all forms of accounts should tend to rise. In the third place, accurately designed accounts framed on a relatively uniform basis, supported by balance sheet and revenue indices, should make for greater efficiency of management in the maintenance of both short-period and long-period equilibrium; there should be less likelihood of disturbance brought about by inaccurate assessments of performance. Fourthly, accounts of improved design would enable those co-operating in industry—owners, employees and managers—to gain an unequivocal view of the relative contributions to the 'net income' made by the factors in production which they represent. And lastly, it may not be too fanciful to see an advantage accruing

[17] Oxford University Press.
[18] *Op. cit.*, pp. 1–2.

to the whole economic structure of society if accounts are made so illuminating that movements of capital tend to be led into right channels."[19]

The influence of such theoretical developments as have been mentioned has not been without effect, as can be seen from the recommendations of the Committee on Company Law Amendment[20] which reported in June, 1945. But it would be wrong to carry away the impression that British accounting research has been mainly directed to questions of disclosure and of the form of accounting documents. The Research Committee of the Society of Incorporated Accountants is even now investigating the subject of "The Measurement of Profits," and has already published a number of important short memoranda.[21] Thus it has been said that this subject seems to derive its special importance from three factors: "1. If management of a business is to take right decisions, it is important that it should know what the true profits of the business are—the true profits unclouded by questions of policy reserves. 2. Secondly, there are certain common practices in the measurement of profits which may have quite notable effects in such economic spheres as the trade cycle. 3. Thirdly, there is a tendency for taxation computations of profits to coincide more and more closely with commercial concepts. It is important therefore that commercial concepts should be classified."[22]

This enquiry has taken the discussion into the ranks of the economists, notably with Dr. H. W. Singer, who will be known to American accountants for his work on *Standardized Accountancy in Germany*, (Cambridge University Press, 1943).

For the accountant profit is largely bound up with questions concerning its distribution, with the consequence that he places the emphasis on its realization in terms of cash or its equivalent; thus it is money profits which accountants measure, a circumstance which tends to veil the *real effects* of price-level changes. Economists wish accounts to furnish information in terms of *current values* with a view to assessing *real values*, and to assist them in making their summations of national capital and income. Thus the net assets of a particular business undertaking constitute one of the assets forming part of the national capital contributing to the current flow of economic goods conceived by the economist as being real gross national income. The whole question has raised important implications pointing to the necessity for the maintenance of the *real capital* of business enterprise, a policy not without influence on the wider issues of full employment and avoidance of trade depressions. It has also raised problems concerning the efficiency of capital goods replacement and of stock valuation, a question which has revived discussion on the economic implications of accounting cost valuations based on the methods denoted as "First-in First-out" and "Last-in First-out," a controversy familiar to American accountants.

The Research Committee of the Society of Incorporated Accountants has now brought the discussion to the point where economists are prepared to accept the necessity for a statement of account in terms of accounting conventions, providing that it is supported by supplementary economic data to be carried in through the technique of an adjustment statement. It has left unsettled the precise data which economists will require and the method of

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[19] *Op. cit.*, p. 19.
[20] *Report of the Committee on Company Law Amendment*, H.M. Stationery Office, June, 1945.
[21] In *Accountancy* for July, October, and November, 1945.
[22] "The Measurement of Profits," by Bertram Nelson, in *Accountancy*, July, 1945, p. 193.

their ascertainment in such a way as to provide figures with which accountants can deal. There are signs, however, that something may be achieved through the setting up of specific price indices for selected classifications of fixed capital assets, a hope which has been fortified in some measure by the recommendations contained in the recent report of the Census of Production Committee.[23]

Thus accounting research in England is gradually penetrating back to fundamental conceptions. There is one last piece of evidence for this in the setting up of a Joint Exploratory Committee by the National Institute of Economic and Social Research and the Institute of Chartered Accountants. This Committee is preparing the ground for later investigations by an enquiry into accounting definitions of such terms as "profit," "loss," "income," "expenditure," "capital," "saving," and "maintaining capital intact." It can no longer be said that British accountants are neglecting their opportunities for sustained academic study and research.

[23] H.M. Stationery Office, October, 1945.

THE ACCOUNTANT AS AN ARTIST

George B. McCowen

Accounting is not a science; it is an art.[1] The general ledger of an accounting system is a picture of a business enterprise in action, but it is not a photographic picture. Rather it is cubistic or surrealistic, and therefore symbolical in nature. It visualizes, for the management and others, one link in the chain of economic activity whereby man makes his living. Put all accounting systems together in a chain, and the totality of economic effort would spread like a mighty mural before our eyes.

There sometimes is a look about the eyes of accountants that has mistakenly been compared with the cold stare of a fish. It does not come from eye strain from unemotionally looking too hard at figures. Instead, it comes from mentally seeing far-off places and far-off activities. For accountants look with an inner eye at commerce and industry—a scene which is one of the mightiest and most complex to be viewed by man.

Perhaps you have stood awed in the presence of the Grand Canyon, a mighty river, or a great volcano. There is the same thrill for those who can see into the mighty sweep of business activities in totality. There is "sweat, blood, and tears" and "hope, faith, and charity" unending. There is birth, play, study, ambition, work, joy, success, failure, sorrow, and broken dreams; there is hunger being appeased, the body being clothed, shelter being provided against the elements. There is greed, pushing, shoving, gouging, robbery, and murder. Wars are fought and millions die because man wants more than he has yet been able to produce.

The accountant can glimpse the whole panorama. The pen, the ledger, the ink are his artist's brush, canvas, and paint; with them he captures some phases of each dramatic movement of the scene.

* * *

Before the genesis of every enterprise there is a void waiting to be filled. It may be that people could use Venetian window shades but few are for sale. A man says,

[1] American Institute of Accountants, *Accounting Research Bulletin*, No. 9, p. 67.

"Let us construct a business enterprise," and a business enterprise comes into being —an artificial thing, invisible, intangible, and existing only in the mind of man and in the eyes of the law. Perhaps the man called the business the Window Shade Corporation, and in the beginning there was nothing inside the enterprise. Because it can have nothing except that it comes from some outside source, and because what it has stays inside for a while and then passes on by way of use (or as goods sold to customers, or as payments to those who furnished the original assets), the enterpriser said, "There must be a fund dedicated to this enterprise so that it may operate and produce goods." Then, as if he had waved a magic wand, many people, and many financial institutions, give up a part of their own cash for stock certificates of this new enterprise. These stockholders are the source of the fund and the fund is inside the business in the form of cash.

Then the accountant as an artist drew in his ledger the equivalent of a little picture of what had been done:

Asset Sources
Stockholders

	100,000 f

Asset Kinds
Cash

t 100,000	

Asset Dispositions
(none)

The ledger is a broad accounting canvas, so broad in fact that each of the little pictures (representing stockholders, cash, and many other things) is in effect a separate account-canvas. But in imagination they appear to blend or flow into each other as harmonious colors do in a landscape. The sources are on the left side of the page because the cash flows from the stockholders into the business, and the flow should be from left to right, for that is the way we read. The large T with "stockholders" written above to form an account is the accountant's pen picture of the people who are the stockholders. The figures stand for the total amount of cash they furnished. The figures are put on the right or credit side of the stockholders account because that is the *from* side as pictured in this flow relationship. The little "f" in the illustration means *from;* the little "t" means *to.*

What do the little pictures stand for that are called "account of stockholders" and "account of cash"? One stockholder is a school teacher in St. Louis; by means of frugal living he has saved $1,000 of his meager salary. Another is a farmer in Ohio; for long years he has tilled the soil but now he is old, so he must sell his farm and move to California where he can live in comfort with the friends who have gone before him. And still another is a bootlegger in Kentucky who has managed to save enough from white mule sales to go respectable and move to town where he can give his young children advantages denied to him because as a boy he had to stay at home and help his pappy with the "corn." Some of the stockholders are the men who started the business enterprise: Ed Lacy who runs the bank; Sam Smith, the local undertaker; Bill Steel, an accountant; and Ned Hubbard, a cabinet maker.

The cash which once was in the pockets and bank accounts of the several stockholders is now in the enterprise; the amount involved is placed under its name on the left side of an account because that is the *to* side of that account in this flow relationship. Cash is a universal asset, a universal means of service; it is valuable because it can be converted into any asset or service with a minimum of delay and trouble. With few exceptions it is universally desired because with it men can buy any asset or service they desire.

Cash is financial power in concentrated form, a sort of nuclear energy for financial society. When properly used (as a

medium of exchange, a measure of value, a store of value) it helps to heal the sick, feed the starving, clothe the naked, and shelter the homeless. It plays a part in the education of the ignorant and in the leisure of the wise. So universal is cash that love of money is called the root of all evil. Improperly used cash is the most destructive force ever invented by man. Beside it the atomic bomb devised by nuclear physics pales into insignificance. But it does not explode like a clap of thunder and lightning; its destructive power creeps up while we are unaware.

Not everyone can take or will desire to take the risks of being a stockholder. Stockholders are entitled to whatever profit the corporation earns, but they must also suffer the losses. The stockholders of the Window Shade Corporation held a meeting; those who could not come were informed of the purpose and asked to vote by proxy or give their vote to someone who could be present. At the stockholders' meeting it was decided that more funds were necessary than were already raised from stockholders, and that it would be desirable to secure $50,000 from people who would lend their money to the corporation at 6 per cent interest, the principal to be repaid in twenty years. Bond certificates were printed and the bonds were sold at par.

The accountant added a sketch of the account of bondholders and the cash they contributed to his accounting canvas as shown below:

ASSET SOURCES

Stockholders

	100,000 f

Bondholders

	50,000 f

ASSET KINDS

Cash

t 100,000	
t 50,000	

ASSET DISPOSITIONS

(none)

The bondholders are several in number. One is a bank in Oklahoma whose trust department is caring for the estate of Jumping Jackrabbit who died with joy when oil was struck on his farm. His only heir is Little White Cloud, who says, "I'm flea-and-a-half years old." One is an old skinflint in Omaha who usually is afraid to take a chance; but 6 per cent looks so much better than the 2 per cent he gets from postal savings that he can't resist. Then, too, Ed Lacy, the local banker, took a good slice of the 6 per cent "stuff"; Bill Steel, the accountant, took some too.

There were others—a thousand dollars here, a thousand dollars there. Each entry represents a separate story in saving, in labor, in luck, and in inheritance.

The Window Shade Corporation of our story has now been financed. The manager, Ned Hubbard, is in the market to buy the services necessary to produce Venetian blinds. He knows that many of the services which he needs are stored in things called assets; only by buying or renting such assets can the corporation secure the use of these services. These assets have the names of land, buildings, machinery, raw materials, factory supplies, and the like.

Many of the services needed to produce and sell window shades must come from free men themselves—the greatest givers of service the world has ever known. Their service cannot be stored as service; but such service can be stored when it has been converted into Venetian blinds or other assets. It is not at all far-fetched to call the services of men by the name "assets." Surely, a thing which turns into an asset is itself an asset.

Some services used by the business must be the combined services of men and assets in their charge. Postage is a service given by men in the United States Post Office Department using the services of many assets, airplanes, trains, ships, and trucks. Thus the services of men around the world are sketched in one small account named Postage.

Ned Hubbard is the manager of the Window Shade Corporation. He is its five senses; he sees, hears, smells, tastes, feels for it, for it is said "A business is but the lengthened shadow of a man." The manager's principal task is making decisions with good judgment. Upon his decision depends much of the success or failure of the corporation. He must decide what services to buy and how much. Someone's profit or loss depends upon his every choice his every act. Will the school teacher in St. Louis realize anything from his savings? Will the Ohio farmer be able to remain at ease in California? Will Little White Cloud be enabled to grow up into a rich Cherokee princess?

Some part of the answers depends on the actions of the manager of this corporation. The manager during the year chose to buy certain assets and services for cash. He was continuing to act on certain earlier decisions, and was making new decisions daily about the proper combination of land, labor, and capital necessary for profitable production. Some of these decisions are expressed in the cash outlays made immediately by disbursements or in using the company's credit to defer cash payment.

The accountant, Bill Steel, observing this inflow of assets and services, pictured them one by one on his accounting canvas. as follows:

ASSET SOURCES

Cash

| 149,200 f

ASSET KINDS

Land

t 1,000 |

Building

t 10,000 |

Machinery and Equipment

t 8,000 |

Raw Materials

t 50,000 |

Factory Supplies

t 5,000 |

Factory Labor

t 50,000 |

Repairs

t 500 |

Taxes

t 1,300 |

Tools

t 1,100 |

Insurance

t 300 |

Drayage

t 700 |

Power

t 2,000 |

Advertising

t 3,000 |

Sales Salaries

t 6,000 |

Shipping Supplies

t 2,000 |

Postage

t 200 |

Administrative Salaries

t 5,000 |

Miscel. Office Exp.

t 100 |

Interest Expense

t 3,000 |

ASSET DISPOSITIONS

(None)

This chart shows the great variety of asset-kinds that flow out of the invested cash. Land is the original source of everything and every service. In this case it is a building site, and it gives off this service forever. To the corporation it is one hundred feet by two hundred feet of space with its apex deep at the center of the earth and its four corners extending upward into the zenith through space without end, a great wedge-shaped piece of the universe. And, by the laws and concepts of private property, it all belongs to the Window Shade Corporation.

A building, as with most other tangible articles made by man, is a mass of many materials brought perhaps from the four corners of the world. It is stuck together with the "sweat, blood, and tears" of the men from many countries. Many of the products used in the structure are the end results of many other business enterprises—steel mills, lumber mills, quarries, brick kilns, cement and plaster plants, copper mines, aluminum mines, and factories of many kinds. If we could follow them back to their sources on the ledgers of those who produced them, the whole of science, economics, sociology, and history would pass in review.

Now the building stands complete and ready to protect workmen, machinery, tools, and materials from the elements. It is a place to work; it gives us the service of shelter.

Each type of machinery and equipment gives off its own peculiar type of service: sawing, cutting, boring, grinding, pounding. And each increases greatly the productive capacity of men. In the aggregate, machinery and the power to run it have increased man's productive power millions of times. Without them man would still exist in a relatively primitive state.

There is romance in the flaming steel furnaces, the rattle and clanging of cranes, the roar of locomotives, and the hiss of steam. Together they play a symphony as grand in its way as any ever written by Beethoven, Bach, or Brahms. It is colossal! It is stupendous! And it is all sketched there in a few symbols on the accountant's ledger—the accounts for machinery, equipment, tools, and power.

Raw materials and finished goods are relative terms. Few raw materials are actually raw; ore, rock, coal, and the other minerals as they exist in the mines and quarries, standing trees, and wild plants are about all. Once labor has been applied to them they become a finished product of some business enterprise. The finished goods of a sawmill are raw material to a building contractor. Raw materials and finished goods are the chief connecting links between most business enterprises and the connecting links in their accounting systems.

Irving Fisher saw this when he explained it in his *Nature of Capital and Income.*[2] Accountants credit the forest and debit the sawmill; credit the sawmill and debit the lumber yard; credit the lumber yard and debit the contractor; credit the contractor and debit the home owner. Materials and services that are sold and bought serve to link enterprise with enterprise in an unbroken chain from the natural product to the final consumer. And the end is not then, because the consumer puts his labor back into the production process to produce more raw materials, finished goods, or services of some kind. Supplies are like raw materials except that they do not appear physically in the finished goods.

Labor as the service of men has already been described under the heading of services. Some serve inside the plant that produces a finished good (factory labor); some repair machines when they break down (repairs); some serve outside the plant to protect us from fire, theft, and war (taxes); some services reimburse us in case of loss (insurance); and another hauls our goods (drayage).

The service of advertising proclaims the merits of our finished goods to all the world. "If a man builds a better mousetrap, the whole world will beat a path to his door,"—if he advertises.

The salesmen's salaries—they bring to mind the only authentic peerage in this democratic nation: the knights of the road.

Administrative salaries reflect the services of the enterpriser. To the economist he is a factor of production in himself,

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[2] New York: Macmillan, 1923, p. 155.

separate and distinct from other labor. The accountant uses the term "administrative salaries" to represent the price paid for a trained mind. Back of the trained mind thus sketched in an account stands the entire educational system and many years of study and experience.

Interest expense is the hire of the money furnished by lenders. The money borrowed was put into productive assets and services and thus will, it is hoped, earn its way and something besides. Interest is a glamorous chapter in business all by itself. In times past men have been jailed, flogged, and killed for charging it. Thousands of sermons have been preached against it. It has been both praised and damned times without number. It is all pictured there in a few strokes of the pen—Interest, $3,000. But you will need to look in imagination through the figures and beyond the printed page.

Then the wheels turned and raw material flowed out of the storeroom onto the factory floor, and there many men worked industriously and intelligently, like ants in a hill. Then parts of many assets and services detached themselves from their original kinds and were drawn to the raw material as a magnet attracts steel filings. The accountant made more of his sketches and these things all appeared on the pictured page in his symbols that represented many things and services put together to make something new under the sun. We call the sketches accounts for goods in process.

Asset Kinds

Building

	100 f

Machinery and Equipment

	80 f

Raw Materials

	40,000 f

Factory Supplies

	4,000 f

Factory Labor

	50,000 f

Repairs

	500 f

Taxes

	1,200 f

Tools

	110 f

Insurance

	30 f

Drayage-in

	700 f

Power

	2,000 f

Goods in Process

t 98,720	

In never-ending stream the goods in process passed out the factory door into the warehouse, and the accountant brushed in that fact as follows:

Asset Kinds

Goods in Process

	80,000 f

Finished Goods

t 80,000	

Back from the knights of the road came orders inspired by the wants for Venetian blinds. Their training—and perhaps their jokes—has played its part well, aided by advertising. Workmen removed finished goods from the warehouse, put them in boxes, and shipped them to all corners of the country. As the finished goods moved out and as the services of salesmen, office workers, and others were used in selling and in general activities, the accountant sketched again and again. He pictured $78,910 of the original $150,000 dedicated to the corporation's productive activities as having now passed completely out of the control of this enterprise.

ASSET KINDS

Finished Goods	
	60,000 f

Building	
	10 f

Taxes	
	100 f

Advertising	
	3,000 f

Sales Salaries	
	6,000 f

Shipping Supplies	
	1,500

Postage	
	200 f

Administrative Salaries	
	5,000 f

Miscel. Office Exp.	
	100 f

Interest Expense	
	3,000 f

ASSET DISPOSITIONS

Cost of Goods Sold	
t 60,000	

Expenses	
t 10	
t 100	
t 3,000	
t 6,000	
t 1,500	
t 200	
t 5,000	
t 100	
t 3,000	
18,910	

Glancing back, the accountant saw new assets coming in to take the place of cost of goods sold and of the used-up assets and services. Customers promised to pay $100,000 for the finished goods pictured above as cost of the goods that passed out of the business. And many customers were making good on their promises, for business men have learned that "honesty is the best policy," and "a man's word should be his bond."

All this the accountant records with a few bold strokes shown below:

ASSET SOURCES

Sales	
	100,000 f

ASSET KINDS

Accounts Receivable	
t 100,000	90,000

Cash	
t 90,000	

This description of the flow between accounts is finished. But the flow of events is not finished; it does not, and cannot, stop so long as the enterprise exists. However, in order to provide tentative and periodic reports, the accountant assumes that the flow of events can be momentarily stopped at the last moment of certain equal intervals of time. Such a moment is now at hand in our illustration. It is time to summarize the income and the costs and expenses; and time to calculate the results of Ned Hubbard's managerial ability. This is done by opening an account for Profit and Loss and transferring to it all income and all costs and expenses. The accountant, as artist, dips his pen for making the closing entries and sketches once more, this time to show a testing of managerial efficiency:

ASSET SOURCES

Sales	
f 100,000	

Profit and Loss	
	100,000 t
t 60,000	
t 18,910	
f 21,090	

Surplus	
	21,090 t

Asset Dispositions

Cost of Goods Sold

	60,000 f

Expenses

	18,910 f

The Window Shade Corporation
Statement of Profit and Loss
For the Year 194–

Sales	$100,000.00
Cost of Goods Sold	60,000.00
Gross Profit	40,000.00
Expenses	18,910.00
Net Profit to Stockholders	$ 21,090.00

The Window Shade Corporation
Balance Sheet
As of December 31, 194–

Assets		*Sources*		
Cash	$ 90,800.00	Bonds Payable		$ 50,000.00
Accounts Receivable	10,000.00	Capital Stock	$100,000.00	
Land	1,000.00	Surplus	21,090.00	$121,090.00
Building	9,890.00			
Machinery and Equipment	7,920.00			
Raw Materials	10,000.00			
Factory Supplies	1,000.00			
Tools	990.00			
Insurance	270.00			
Shipping Supplies	500.00			
Goods in process	18,720.00			
Finished Goods	20,000.00			
Total Asset Kinds	$171,090.00	Total Asset Sources		$171,090.00

Ned Hubbard seems to have passed the test with flying colors; the profit of $21,090 on an investment of $100,000 by the stockholders is a return of 21.09 per cent. The St. Louis school teacher will be pleased with that, and Little White Cloud is wealthier by her 6 per cent.

Thus the accountant-artist completes his picture. It is not sketched in oils or water colors; it consists only of a few sheets of paper covered with numbers arranged in symbolical ways. But the picture tells a story. It is a record of the flow of contracted prices through a business enterprise; and the record is arranged in such manner that an income calculation can be made from the facts as a test of managerial efficiency, as a guide to dividend policy, and as a control device for factory, sales, and administrative activities. It is a picture of the activities of one part of the great complex fabric of total economic effort.

But in the ledger, the accountant-artist has painted in great detail; for many purposes it is too broad, too detailed. Therefore, significant summary briefs (miniatures) are prepared from the ledger accounts. The miniatures, being compact and simplified, are more understandable, and therefore are more usable for managers, stockholders, bondholders, and the public. They are represented in the accompanying exhibit.

These statements are the accounting-pictures the public commonly sees. Their interpretation and appreciation in use will depend in a large measure upon the users' knowledge of the accountant's artistry in recording the flow of assets through the business enterprise.

THE ACCOUNTING EXCHANGE

A. C. LITTLETON

PROFESSIONAL accountants, in turning their mind toward expected postwar activities in business, are thinking among other things about the accounting problems of small business[1] and the professional problems of public accountants in the smaller communities.[2]

The Smaller Practitioner. This thinking gives support to George O. May's statement that "Accounting has developed from a service department of business to become a social force." It also suggests that public accountants are aware they must accept new obligations to society as their technology becomes a social force. They have clearly accepted the duty to get qualified people into the profession. The support given to university education in the subject and to the work of providing suitable technical examinations and of fostering effective legislation is a part of this activity. So too, is the stress now placed upon selective recruiting and the development of a program of personnel testing.

It is also a social obligation, as well as sound firm policy, to aid staff people to attain full competence. To this end some firms provide special training for beginners and diversify the experience as an aid to their professional growth. Much more could be accomplished in this area if staff educational activities were as systematically developed for seniors and as widely used as is staff training for beginners.

Is there not another social obligation—that of helping qualified men who wish to establish a small independent practice? These small firms, located for the most part in the smaller business communities, would often prove to be missionaries for good accounting in business. That would be good for the profession as a whole. They would perform much needed services in their communities. That would be good for the communities individually and collectively. Does the man with a small practice and only a few assistants get as much help as he deserves from the state and national accounting organizations? How could the man who wishes to practice in his own name be given a helpful hand without doing violence to professional ethics?

Questions like these were put to several certified public accountants practicing in smaller towns. Their suggestions and a few ideas of my own are combined to form the outline of the paragraphs that follow.

Local businessmen outside the larger industrial cities realize only vaguely how a public accountant can help them. Could they not be informed in a suitable manner of the services professional accountants offer? Perhaps this might be done effectively through articles in trade journals. This would enable the authors to give a definite trade slant to the described services of accountants. Brief case histories (identities concealed) of the way external accountants had proved helpful would be a very useful kind of material. Reprints could be made available to small firms in a position to serve local clients in the same line as the trade journal. Such articles should make it a point to explain the preparation and testing a public accountant

[1] Maurice H. Stans, "Accounting Problems of the Small Business," *Journal of Accountancy*, September 1943; J. A. Phillips, "Accounting Problems of the Small Business," Wartime Accounting Conference, Texas Society of Certified Public Accountants, Houston, April, 1944.

[2] Stephen Chan, "Working Papers—Their Preparation and Use by the Smaller Practitioner," *New York Certified Public Accountant*, October, 1945; Richard C Rea, "Public Accounting in Smaller Communities," *Journal of Accountancy*, October, 1945.

must undertake, and outline the professional and statutory discipline under which he does his work.

Such aids as these would seem to be within the power and spirit of the American Institute of Accountants.

The state societies could do even more. Through suitable committees they could publish the names and addresses of qualified (registered-certified) local accountants available to serve a group of neighboring counties. They could survey their state for communities whose probable accounting needs were provided for inadequately.

Committees could supply occasional accountant speakers before local service clubs, or provide speech outlines for local accountants to build upon; they could make reading recommendations on matters likely to be of concern in local practice, make known the names of men or firms having specialized experience, and invite local practitioners to avail themselves of an opportunity to consult with these men regarding appropriate local problems.

There are various barriers between public accountants and certified public accountants. Some of these could be removed in the public interest. There are distinctions between them that cannot be bridged merely by goodwill; and the public should be well informed of the statutory qualifications demonstrated by one and not by the other. Yet, as regulatory legislation spreads and both groups are licensed to practice, they both will come to understand that their basic interests are not antagonistic; that they very seldom are in actual competition; that useful needed services are performed by men who do not have certificates. It would be better for all parties, and for the community, if these practitioners became better acquainted.

Why not grant licensed but uncertified public accountants guest memberships in the state society? Why not aid in the formation of "county chapters," so that licensed practitioners, whether certified or not, would be encouraged to meet occasionally in friendship to exchange experiences? Several neighboring counties could be grouped for this purpose so that the number of people attending would not be too small. These "chapters" could also become the site of occasional joint meetings with the state society of certified public accountants. Men with local practices would learn much from those having broader experience, and men from the larger firms would find most local practitioners to be men of sound professional ideals and considerable competence. Perhaps several useful joint committees could be formed through which interim contact could be maintained. It is not impossible that aid and advice would encourage many to prepare for the CPA examination who otherwise would not make the effort.

Professional men naturally have a strong constructive imagination. If they put their mind to the problem in the state societies more and better ideas would no doubt emerge than have been suggested here.

Help from the Larger Firms. Can the large firms help to vitalize professional accounting further by lending aid and encouragement to the development of local services? Several things could be tried; some of them might prove very constructive.

If a staff man thinks he would like to develop an independent local practice his first questions will probably include these: Do I have the necessary qualifications? Where is there a promising location? How do I go about getting a foothold?

Members of the firm could canvass questions like these in advance and formulate a planned approach to helping the man who indicates that he wants a local practice. The qualifications, they could point out, probably would include ease in making friends with strangers, since creating a

good initial impression is probably more important in meeting one's own prospective clients than it is in beginning a new assignment already contracted by the firm. A willingness to perform small services cheerfully and well will be desirable; these frequently develop into more substantial engagements. In some ways a young attorney has an advantage; he can expect to pick up numerous small fees, but small-fee work is not yet customary in public accounting. There are not very many full-program audits in most smaller communities. But when the businessmen there gain confidence in the local professional accountant they will furnish more small engagements than a staff man familiar with large engagements would expect. Incidentally, it may be found that most local attorneys and bankers would prefer that the income tax returns their clients now bring them should be prepared by competent accountants.

Where to locate is certain to be a problem. It need not be in virgin territory that has no accountant servicing it, provided the potential need is greater than the available service. But in any event a location will not be easy to choose. Experienced partners should be able to suggest survey procedures for their man to try. Volume of general business by localities, figures on industrial production, bank clearings, taxable property, post office receipts, etc., might furnish some initial clues. As the field is narrowed, vacation visits to several possible lcoations should prove helpful. A study of the local telephone book would reveal the available public accounting services, and might often afford a quick insight into the diversity of local enterprises.

Are there any further ways in which the firm could help after these preliminaries have been settled? It would seem that there are. For example, the partners could hold open the possibility of a return to the staff within a certain time limit in case the venture turned sour. They could underwrite a living-expense loan to be drawn upon during the man's first year alone, when, as, and if needed, and to be repaid from early fees. They could sometimes induce a few smaller clients to transfer their accounts to the new practitioner; they could refer requests from new local clients to local practitioners; they often might be able to use the new man as a local representative of the firm; they could encourage the local man to consult the firm on technical matters, program advice, and the like, during his early years of practice on his own account.

Assistance of this kind would be invaluable to the new practitioner. It would make him a friend and booster for life; and it would make a real contribution in expanding the services of accounting.

If it will help to keep America a strong and democratic republic to assist tenant farmers of demonstrated ability to become the owners of farms, and to assist capable mechanics and others of suitable experience to start their own small businesses, then it would seem to be a public service in more ways than one for the organized profession to offer concrete and practical help to qualified individuals desiring to establish a small accounting practice.

Theory Can Be Useful. There is a gulf between theory and practice. There ought to be a way to bridge it, for each has a function and neither one is complete without the other. Theory should not seem to dictate to practice; but now and then a writer seems to imply that practice must necessarily dominate theory. Those who indulge in theorizing realize, unless they are poorly prepared to theorize, that practice to be sensible must at times be expedient and variable. Those who practice realize, unless they are merely routine-minded traditionalists, that all actions derive from some reason or purpose, that

is to say, that practice rests upon theory.

Actually there is no contest between the two. Theory is not practice and practice is not theory. Practice must be practical. But why expect theory to be practical? Theory must stick to its function and be theoretical. And being so—living according to its nature, so to speak—it will have its own usefulness.

Because accounting practice must meet the test of producing concrete accomplishments it should operate under the influence of a pragmatic philosophy. The best way is the way that works best. The significance of an accounting technique, therefore, will lie in its ability to provide a satisfactory means of reaching a chosen goal.

But pragmatism is not a good guide for accounting theory. Because accounting theory serves primarily as an aid of understanding rather than accomplishment, it should operate under a rationalistic philosophy. An idea derives much of its strength from an association with relevant ideas. The full significance of an accounting principle, therefore, is not likely to be perceived unless its relevance to a body of integrated and cohering accounting ideas is clearly seen. This is true because a principle of theory is explanatory. A rule of practice, however, is not explanatory but directive in nature.

Since theory aids understanding, and practice needs the aid of good judgment, it is easy to see that theory is useful to practice because understanding makes for better judgment.

Statistical Truth. A statistical category labeled "horses," with an indicated quantity of 100, creates a definite mental picture in the reader's mind. However, if inspection of the corral showed 90 horses and 10 mules we would rightly doubt the statistical truth of the category as reported.

Several possible explanations of this misleading report of a statistical fact might be found. Perhaps the classification category was poorly named—the intention having been to report the number of "equine draft animals." Perhaps the purpose of the classification was not clearly perceived in the beginning. Perhaps the intention was to count horses but the person reporting did not realize that there is a difference between horses and mules.

It is easy to see possibilities for statistical untruth in this simple example. But it is not easy to see the same possibilities in traditional accounting categories. Yet statistical untruth may also creep into these by way of the same kind of faults: misleading class name; inadequate definition or understanding of class limits; introduction of data irrelevant to the intended class.

For example, consider "cost of goods sold." The use of an inventory priced at market that is lower than cost will throw a "loss" into the "cost of goods sold" figure —a shrinkage that in fact is not at all associated statistically with the goods that have actually been sold by this enterprise. One or more of the elements of statistical truth are lacking in the reported figure. Again, depreciation expense charged to manufactured product, if the rate includes allowance for probable obsolescence of machinery or product, will burden the cost-of-goods-sold category with debit dollars which cannot in the nature of the case have influenced the creation of that specific product. Factors outside the given enterprise do suggest that better machinery is available; but that availability is irrelevant to the manufacturing cost of product derived from the use of equipment already in the enterprise. And idle equipment cannot convert its creative power (measured by investment cost) into product it does not work on.

To force product, and hence the cost of sales, to include a cost-loading for irrelevant factors is comparable with classifying mules as horses. And as sergeant Smith of

the mulized artillery would say, "Don't fool yourself, brother."

If expediency is the controlling factor, the easier road may be accepted for practical reasons. But this does not change the statistical untruth of the category and its figures. If the amount involved is so immaterial as not to change the cost of sales significantly, then price shrinkage of inventory does not deserve any consideration whatever. It might be said that the facts are unavailable to make possible a proper calculation of obsolescence separate from wear and tear. The same assertion was made long ago about advance estimates of wear and tear and about estimating probable bad debts. In this connection the argument is now regarded as invalid. In spite of the difficulties of making advance estimates, statistical-accounting results are closer to the truth for their use. The same can be said about making separate estimates for recurring obsolescence.

A good deal of accounting progress has been made by refining the statistical truthfulness of accounts. The same road still stretches out ahead.

Provide for All Losses. Some of the conventions (customs) of accounting derive their sustenance from the formula "Provide for all losses; anticipate no gains." As a dictum or as an admonition of conservatism, the phrase has a persuasive sound. Yet, like a familiar proverb, it seems to say more than it means. This particular dictum contains a good deal of common sense in relation to matters of policy; but it is not nearly so significant when used as a directive for making accounting calculations.

Income determination is basically a calculation of end results. However, it is not approached as engineering calculations are, that is, through the use of formulae and standards derived from scientific experimentation. The accounting mechanism of income calculation is the income statement. The result of using this device is a synthesis of numerous income-affecting factors, and not at all a single-figure outcome of combining several formulae. The income statement is more than a calculation of a single significant figure. It is also a report on or disclosure of the separate components. (Incidentally the need for such a report is that comparative balance sheets are not a satisfactory means of determining periodic net income). Much more is involved in the income statement, therefore, than an end result. Even if the end figure were not affected quantitatively by the treatment of a certain item, an inadequate display of income factors in the body of the income statement may create a misleading statistical picture.

If, for example, the dictum of conservatism is applied mechanically as though substituting figures in a formula, this may produce the intended effect upon the net income figure as the end result, yet at the same time distort the statistical reporting of the separate income factors. This happens each time that inventory is entered at a price of the lower of cost or market. The location of the show of conservatism in the income statement may be a material element in good reporting.

In engineering, conservatism that is beamed toward general practice is written directly into the experiment-tested formulae and the technically determined standards as planned factors of safety. (Steel, which in experiments will resist stresses up to 72,000 pounds per square inch, may be figured in the formulae of standard practice at 18,000 pounds; snow may enter the calculations of roof-loading at 40 pounds per square foot, although no local snowfall had ever produced anything near that figure.) In business, however, there are few if any experimentally determined formulae or scientifically calculated factors of safety. Yet conservatism can still be a policy even if formulae for expressing

conservatism are lacking. Conservatism in accounting calculations can always be given effect by using the technique of reserves—debited to surplus or against revenue as circumstances dictate. It is most appropriate to accounting method to give thought to conservatism after, not before, the best possible objective, factual determination has been made of the principal separate costs and revenues relevant to the given enterprise and to the particular fiscal period.

It is clear, therefore, that adequate procedure is available for taking unusual circumstances into consideration even though the ultimate facts will not be known with complete objectivity until later. Thus probable future losses from selling inventory items at lowered prices do not have to be "loaded," with no regard for statistical truth, into the current cost-of-goods-sold figure. Again, if obsolescence of equipment is sufficiently predictable to justify an increase in depreciation expense by a certain amount, it is sufficiently predictable to be used for increasing the statistical truth of accounting otherwise, that is, through treating obsolescence as a separate revenue charge disassociated from depreciation expense.

This line of reasoning, it will be noted, raises no objection to making suitable provisions for losses that are not yet conclusively proved by objective circumstances to be relevant to the particular enterprise or period. It aims to give expression to the thought that any "providing" should be done openly, that is, without submerging the quantitative fact in an altered inventory figure, or in depreciation expense which is greater than that justified by the best estimate of wear and tear from productive use, attack of the elements, and physical damage.

The Valuationist. Some people, such as a dramatic critic, make an occupation of criticism. The public accountant is also a critic, not very dramatic, it is true, but he does take a critical view of what he examines. Is there anything in the one occupation to help us comprehend the critic's function in the latter?

A dramatic critic need not be an actor or a dramatist to be a good judge of drama and acting. But he assuredly must understand both of these in the abstract in order to react intelligently to either of them in the concrete. He relies strongly upon his intimate knowledge of the drama of the past; he has developed a sensitiveness to good art. Furthermore, he is greatly influenced by his appreciation of human nature in forming his opinion of the play as a vehicle. And he will set a high value upon impartiality and skill as a reporter.

Therefore the dramatic critic is a judge of relative values; and he reaches his conclusions by combining his understanding of drama and human nature with his sensitiveness to good and bad drama and good and bad portrayal of human emotions.

Understanding and sensitiveness are also basic to an auditor's critical function. We hesitate to apply the term "valuer" to an auditor, since it might seem to make him responsible for knowing the use value, or probable sales value, of such a multitude of things as to be beyond the powers of any one man. Perhaps "valuationist" is better. Whenever choices have to be made relative values will be involved; whoever deliberately chooses among relative values, judging some to be better, some to be worse than others, can be called a valuationist.

Necessarily a valuationist must be something of a critic, that is, a practical judge of good and bad; and a wise critic will be careful to exercise his talent only within a limited field in which he has acquired specialized knowledge. Some valuationists will be critics of the truthfulness with which dramatist and actors portray human nature in action. Other valuation-

ists, such as auditors, are, in essence, critics of statistical truth.

Because accounts are fundamentally statistical categories, each one should be so defined as to aid in the accumulation of statistically truthful data. Because accounting processes are used primarily to get the transaction events of an enterprise classified and reclassified into these statistical categories, the accounting system should be so designed and operated as to accomplish a proper classification and summarized disclosure of enterprise events and the effect of managerial decisions. Because accounts and accounting processes are sometimes poorly designed or faultily operated, it is part of the auditor's function to act as a critic of the statistical truth underlying the financial statements. He is greatly concerned to judge whether the accounting system is such that the analysis of transactions and the making of records have a good chance of producing dependable data in the financial statements; and one of his important responsibilities is to form an opinion regarding the reliability of the data actually produced by the use of the system in a given fiscal period.

In his appraisal of an accounting system, the auditor is a valuationist judging critically the good and bad features, that is, the features of the system that make it well suited or poorly suited as a mechanism for producing truthful statistical classes of accounting facts. In his appraisal of the results of operating the accounting-statistical mechanism, the auditor is again a valuationist, this time judging critically the good and bad features (1) of the interpretations given to events by the men using the classification and reclassification processes of accounting, and (2) of the financial statements as an adequate and effective means of disclosing compactly yet intelligibly the financial position of the enterprise and the results of the period's operations.

It is easy to be critical; one need only select a few pet ideas and find fault with all ideas that are different. But to be a discerning critic, to develop a faculty for constructive criticism, that is difficult indeed. Yet this is one of the qualities of a good auditor; and a great many practitioners deserve that rating. It is doubtful whether a faculty for constructive criticism is inherent. It is more likely to be strong in some men, or weak in others, according to the amount of thoughtful study and painstaking observation given to cultivating it. For it is study and observation that foster a real understanding of accounting theory and practice; and understanding is the ***sine qua non*** of a discerning critic.

The customs, conventions, and traditions of accounting, together with an acquired skill in their use, make up accounting practice. However, practice is not static—once learned, forever appropriate. Practice is variable according to the circumstances—not as pure expediency but according to a trained mind's conceptions of varying suitability. An understanding of variability among conditions and of the possibilities for variations in practice are necessary parts of the basis for discriminating between degrees of good and bad practices.

The reasons, explanations, and pro-and-con arguments of accounting constitute accounting theory. And theory as well as practice is full of variations. For explanations may range from good to bad; and reasons may be utterly convincing or completely irrelevant, or may show many intermediate gradations. An understanding of differences in quality between reasons is fully as important in an auditor as is an understanding of the possibility for varying the practice to fit the circumstances.

Since an auditor must in the nature of the case be a valuationist he should be conscious of his duty to discriminate and

to judge, and he should seek to learn the bases of good judgment and clear discrimination since those qualities do not come into existence automatically even with the passing years of experience. In the recent report of a Harvard Committee, entitled *General Education in a Free Society*, there is a statement at page 71 that is pertinent to the point being made here: "Discrimination among values involves choice. The ability to discriminate in choosing covers not only awareness of different kinds of values but of their relations, including a sense of relative importance and of the mutual dependence of means and ends."

The need for exercising good judgment is often stressed in the writings of accountants. But the elements in the concepts of *good*, as these relate to the act of judging, are seldom analyzed by them. And the need for an awareness of relations between different kinds of values and between differing means to a chosen end is seldom brought to the attention of a class by the accounting teacher. Surely some attempts to teach the elements of discrimination are justifiable in college classes; the whole burden should not rest upon experience alone.

Group Education. An interesting and forward-looking suggestion was recently made by Julius E. Flink of Newark, New Jersey. He favors the formation of a Practicing Accountancy Institute, similar to the Practicing Law Institute, for the purpose of offering continuing accounting education suitable to CPA's already in practice. Part of his address, as quoted in the *Certified Public Accountant* for February, 1946, is as follows:

"A Practicing Accountancy Institute is the inevitable answer to the growing thirst for knowledge by accountants. The studies and research should be on the level of the practicing CPA. We should not duplicate the work of professional schools. We should begin where they leave off; our studies should be professional in nature, and be rooted in actual practice. Courses should be integrated as a whole, and within certain subdivisions, and each course should be integrated within itself. The 'seminar' rather than lecture method should find a primary place in the system of presentation. This will require limited size of study groups and demand cooperative effort, study, and contributions, under special leadership, by all participants. A by-product should be contributions of the group to the profession as a whole.

"I present for your consideration the wisdom of ultimately establishing an institute for practicing certified public accountants. Such an institute should be an autonomous body with a life, continuity, and experience of its own. Yet it should be sponsored, influenced, and interlocked with the existing professional societies. Like the Practising Law Institute, it should be separately incorporated. Its charter would be that of a corporation organized for non-pecuniary profit. The nature of its sessions cannot and should not be predetermined in advance with dogmatism and with fixed and rigid preconceptions. Their character must be shaped by the expressed needs of the practitioners, by the special abilities and talents of those who conduct courses, and by the general aims of the profession as conditioned by the impact of the economic changes that develop. We must recognize that busy practitioners generally lag behind the vanguard of the professional frontiersmen who break new ground and who develop new ideas. The courses therefore should seek to explore and evaluate these new developments and cut down any undue lag caused by preoccupation with current tasks or by a natural and understandable inertia.

PROFESSIONAL EXAMINATIONS
A Department for Students of Accounting

HENRY T. CHAMBERLAIN

THE FOLLOWING problems were prepared by the Board of Examiners of the American Institute of Accountants and were presented as the second half of the C.P.A. examination in accounting practice on November 8, 1945. The weights assigned were: problem 1, 25 points; problem 2, 15 points; problem 3, 10 points. Candidates were required to solve all problems in four and a half hours.

A suggested time schedule is given below:

Problem 1	75 minutes
Problem 2	60 minutes
Problem 3	60 minutes

No. 1

From the following information prepare a consolidated balance-sheet of Holding Co. and its wholly-owned subsidiary as at July 31, 1944.

On June 30, 1944, A & Co., partnership (profits and losses shared equally), and X Corp. consummated a consolidation agreement pursuant to the terms of which Consolidated Co., newly organized and incorporated with an authorized capital of 20,000 shares of $100 par value common stock, acquired for its common stock issued in the amount of $950,000 to A & Co., and $550,000 to X Corp. certain net assets of the respective companies as follows:

A & Co.—All net assets (including buildings at an appraised sound value of $1,100,000), excluding notes payable

X Corp.—All net assets excluding buildings

The balance-sheets of A & Co. and X Corp. at June 30, 1944, before consolidation are condensed as follows:

Particulars

Assets	*A & Co.*	*X Corp.*
Land	$ 50,000	
Buildings, less reserves	1,000,000	$ 125,000
Machinery, less reserves	250,000	15,000
Inventory	150,000	435,000
Patents	10,000	
Cash	25,000	125,000
Accounts receivable	165,000	500,000
	$1,650,000	$1,200,000

Liabilities

Bond and mortgage payable	$ 600,000	
Notes payable	100,000	
Accounts payable	300,000	$ 500,000
Capital and undivided profit (loss)		
Partner A	350,000	
Partner B	100,000	
Capital stock		800,000
Undivided profit (loss)	200,000	(100,000)
	$1,650,000	$1,200,000

On July 1, 1944, A & Co. conveyed 1,000 shares of common stock of Consolidated Co. to the note holders in full settlement of their claims and immediately thereafter distributed the remaining shares of such common stock to the partners in dissolution. On the same date, after the consolidation, in order to provide Consolidated Co. with working capital, A (the recipient of his partnership share of Consolidated stock) contributed 10% of the stock so received by him, only, to Consolidated Co. Such contributed stock was sold by Consolidated Co. on July 25, 1944, for $105 per share.

During July 1944, as a result of operations, the net assets of Consolidated Co. increased by $25,000 represented by increase in cash. For purposes of this problem, assume other balance-sheet accounts did not change during July.

On July 31, 1944, the stockholders of Consolidated Co. sold their interests to

Holding Co. A balance-sheet of Holding Co. at July 31, 1944, after acquisition of 100% of the issued and outstanding stock of Consolidated Co. is as follows:

HOLDING CO.
Balance-Sheet—July 31, 1944

Assets		*Liabilities*	
Investment in Consolidated	$1,600,000	Capital stock	$2,000,000
Securities—other	600,000	Earned surplus	350,000
Cash	150,000		
	$2,350,000		$2,350,000

No. 2

From the information following, prepare a statement of cost of goods sold. For purposes of this statement, inventories are to be stated at cost as follows: materials, according to the first-in, first-out method of accounting; direct labor, at an average rate determined by correlating total direct labor cost with effective production during the period; and manufacturing overhead, at an applied rate of 120% of the direct labor rate.

The records of Rowe Corporation for the six months ended June 30, 1944, show the following facts: raw materials inventory, January 1, 1944, $3,600; purchases, $26,615; direct labor, $30,000; manufacturing overhead applied (120% of direct labor), $36,000: under-applied manufacturing overhead $300; finished goods inventory, January 1, 1944, $6,200; selling expense, $30,300; administrative and general expenses, $43,200.

A review of the records discloses the following additional information bearing on the above facts:

1. Purchases consist of the following:

	Units	*Unit Price*	*Amount*
January	1,100	$4.85	$ 5,335
February	900	5.00	4,500
March	500	4.90	2,450
April	700	5.00	3,500
May	900	5.10	4,590
June	1,200	5.20	6,240
			$26,615

2. Purchases during January, as above, do not reflect a supplier's reduction memo in the amount of $450.
3. Data with respect to quantities are submitted as follows:

	Units 1/1/44	*Units* 6/30/44
Raw materials	700	‡
Work in process (80% complete)	None	500
Finished goods	300	800
Sales, 4,100 units		

‡ Raw materials are issued at outset of the manufacturing process and during the six-month period it may be assumed that no returns, spoilage or waste occurred. Each unit of finished goods contains one unit of raw material.

4. A 5% increase in all direct labor payrolls, retroactive to January 1, 1944, was approved by the Wage Stabilization Board on July 15, 1944. Pending such approval, the 5% wage increase had not been accrued in the books although an equivalent amount of cash had been set aside in escrow for the employees by the company.

No. 3

Prepare a work sheet for Mr. John Jeff, taxpayer, to show his 1944 taxable net income for purposes of reporting such income on Form 1040.

Mr. John Jeff informs you that for purposes of his declaration of estimated tax for 1944 he estimated his federal income-tax net income for 1944, as follows:

Income—	
Salary—President of Jeff Co. Inc.	$18,000
Dividends—Jeff Co. Inc.: $.25 per share of common stock	5,000
Net profit from individually owned manufacturing business	6,500
Total estimated income	$29,500
Deductions—	
Interest	$ 1,375
Taxes	1,220
Contributions, medical expenses and other deductions	4,000
Total estimated deductions	$ 6,595
Estimated Federal income tax net income for 1944	$22,905

Information obtained from the 1944 records maintained by Mr. John Jeff follows:

1. Jeff received the salary estimated for 1944 and also, on December 23, 1944, a $1,500 bonus which he actually deposited in his bank account on January 3, 1945, after his return from a Christmas business trip.
2. In connection with company business, Jeff incurred expenses of $275 not reimbursed by the company.
3. Dividends were received as follows:

Issuing Company	*Kind*	*Amount*
Mining Mineral Co....	Cash	(a) $ 2,250
Jeff Co. Inc..........	Common	(b) 20,000
Jeff Co. Inc..........	Cash	5,000
Dominion Rayons, Ltd. (after deduction of $375 Canadian withholding tax)............	Cash	2,125

   (a) Includes $1,500 reported by the issuing company as paid out of capital.
   (b) Represents fair market value of common stock received as a dividend on identical common stock owned by Jeff.
4. Sales of securities during 1944 reflect the following results:
   (a) Loss of $3,750 on securities held not more than 6 months.
   (b) Share of net short-term capital gain of partnership in process of liquidation, $5,250.
   (c) Reference to 1943 income-tax return indicates an unused capital loss carry-over of $1,200 and taxable net income of $15,527.
5. Net profit per books from individualy owned business is summarized as follows:

Gross profit on sales................	$42,500
Administration and general expenses	37,000
	$ 5,500

   Note: Administration expenses include (1) $4,500 drawn by Jeff; (2) $400 repair charges on an auto used 75% for business and 25% for personal needs; and (3) credit for $150 proceeds from the sale of old furniture on June 30, 1944, having no book value. Such furniture was purchased on 1/1/38 for cash, $800, and had been depreciated 10% annually for tax purposes, but written off on books at time of purchase.
6. Jeff held a worthless note for $2,000 received in 1939 for a loan outside his regular business. Insolvency of the estate of the debtor to whom he had made the advance indicated that the note was totally worthless.
7. Contributions and donations—

American Red Cross..............	$1,000
War Fund........................	1,000
Community Chest..................	500
Wedding gift to daughter..........	2,500
Hospitalized sister-in-law (not a dependent)..................	1,200
Total.......................	$6,200

8. Interest—

Interest on brokerage account balance.........................	$ 655
Interest on mortgage on Jeff's residence.........................	750
Total.......................	$1,405

9. Taxes—

Federal excise taxes (non-business)..	$ 135
1943 Federal income tax............	2,250
State income tax..................	715
Real-estate tax..................	975
Total.......................	$4,075

10. Medical expenses for 1944.............. $ 650
11. Custodian fees paid for maintaining non-taxable securities.............. 125
12. Periodic alimony payments to S.S. Jeff (former wife) under decree dated November 11, 1944.............. 450
13. Refund of 1940 federal income tax received.............. 21

Solution to Problem 1

Computation of Profit to A & Co., on Sale to Consolidated Co.

Net assets of A & Co.—per books..........................	$ 650,000.00
Write-up of land..........................	100,000.00
	$ 750,000.00
Add liabilities assumed by partners..........................	100,000.00
Net assets transferred to Consolidated Co..................	$ 850,000.00
Stock received from Consolidated Co.—par value............	950,000.00
Profit to A & Co..........................	$ 100,000.00

A & Co.
Partners' Capital Accounts

	A	B	Total
Balances, per books	$ 450,000.00	$ 200,000.00	$650,000.00
Write-up of land	50,000.00	50,000.00	100,000.00
Profit on transfer to Consolidated Co.	50,000.00	50,000.00	100,000.00
	$ 550,000.00	$ 300,000.00	$850,000.00
Consolidated Co. stock distributed	550,000.00	300,000.00	850,000.00

Consolidated Co.
Balance Sheet
July 1, 1944
Assets

Land		$ 50,000.00
Buildings		1,100,000.00
Machinery		265,000.00
Inventory		585,000.00
Patents		10,000.00
Cash		150,000.00
Accounts receivable		665,000.00
Goodwill		20,000.00
		$1,845,000.00
Liabilities		
Bond and mortgage payable		$ 600,000.00
Accounts payable		800,000.00
Capital stock authorized 20,000 shares, par value $100.00 per share; issued 15,000 shares	$1,500,000.00	
Less treasury stock—550 shares	55,000.00	1,445,000.00
		$1,845,000.00

Computation of Book Value of Consolidated Co. at July 31, 1944

Book value of Consolidated Co.—July 1, 1944	$1,445,000.00
Sale of 550 shares of treasury stock	57,750.00
Net income—July, 1944	25,000.00
Book value of Consolidated Co.—July 31, 1944	$1,527,750.00

Holding Company and Subsidiary
Consolidated Balance Sheet
July 31, 1944
Assets

Land	$ 50,000.00
Buildings	1,100,000.00
Machinery	265,000.00
Inventory	585,000.00
Patents	10,000.00
Cash	382,750.00
Accounts receivable	665,000.00
Securities	600,000.00
Goodwill	92,250.00
	$3,750,000.00
Liabilities	
Bond and mortgage payable	$ 600,000.00
Accounts payable	800,000.00
Capital stock	2,000,000.00
Earned surplus	350,000.00
	$3,750,000.00

Solution to Problem 2

Units of finished goods produced:

Units sold		4,100
Less units on hand 1/1/44		300
		3,800
Units on hand 6/30/44		800
Total units produced		4,600

Units of material:

Units purchased		5,300
Units on hand 1/1/44		700
		6,000
Issued to production:		
Finished goods	4,600	
Work in process	500	5,100
Units on hand 6/30/44		900

Cost of material used:

Inventory 1/1/44	700 units		$ 3,600.00
Purchases ($26,615.—$450.)	5,300 units		26,165.00
	6,000 units		$29,765.00
Less: Inventory 6/30/44	900 units	@$5.20	4,680.00
Total	5,100 units		$25,085.00

Units of labor and overhead:

In finished goods	4,600
In work in process (80% of 500)	400
Total	5,000
Labor unit cost ($31,500÷5,000)	$6.30

Work in process inventory:

Material:		
300 units @$5.20	$1,560.00	
200 units @ 5.10	1,020.00	$ 2,580.00
Labor, 400 units @$6,30		2,520.00
Overhead, 120% of direct labor		3,024.00
Total		$ 8,124.00

Finished goods inventory:

Material:		
700 units @$5.10	$3,570.00	
100 units @ 5.00	500.00	$ 4,070.00
Labor, 800 units @$6.30		5,040.00
Overhead, 120% of direct labor		6,048.00
Total		$15,158.00

Rowe Corporation

Statement of Cost of Goods Sold
For the Six Months Ended June 30, 1944

Material used (See schedule)	$25,085.00	
Direct labor (105% of $30,000.)	31,500.00	
Manufacturing overhead (120% of labor)	37,800.00	$94,385.00
Inventory of work in process		8,124.00
Cost of finished goods manufactured		86,261.00
Inventory of finished goods 1/1/44		6,200.00
		$92,461.00
Inventory of finished goods 6/30/44		15,158.00
		$77,303.00

Deduct:		
Over absorbed overhead:		
Amount absorbed (120% of $31,500)	$37,800.00	
Actual amount of overhead	36,300.00	1,500.00
Cost of goods sold		$75,803.00

NOTE:

Inventories of finished goods and work in process on hand June 30, 1944 have been priced at actual cost of material on a first-in, first-out, basis and labor at an average cost. Manufacturing overhead has been applied on an estimated rate of direct labor (120%) which results in work in process and finished goods inventories being stated in excess of actual costs by amounts of $120.00 and $240.00 respectively.

Solution to Problem 3

John Jeff

Computation of Taxable Net Income for 1944

			Deductions	*Income*
Salary				$18,000.00
Bonus				1,500.00
Business expense			$ 275.00	
Dividends:				
Mining Mineral Co.		$ 750.00		
Jeff Co. Inc.		5,000.00		
Dominion Rayon Ltd.		2,500.00		8,250.00
Capital gains and losses:				
	Loss	*Gain*		
Short term	$3,750.00			
Partnership gain		$5,250.00		
Carry-over	1,200.00			
Bad debt	2,000.00		1,000.00	
Income from business				9,780.00
Contributions:				
Red Cross		$1,000.00		
War Fund		1,000.00		
Community Chest		500.00	2,500.00	
Interest:				
Brokerage account balance		$ 655.00		
Mortgage		750.00	1,405.00	
Taxes:				
State income tax		$ 715.00		
Real estate tax		975.00	1,690.00	
Medical expense			—	
Alimony			450.00	
			$ 7,320.00	$37,530.00
Taxable net income			$30,210.00	
			$37,530.00	$37,530.00

NOTES

(1) It is assumed that the stock dividend received from the Jeff Co. is a nontaxable dividend.
(2) It is assumed that the interest on the brokerage account balance was not incurred to carry tax-free securities.
(3) It is assumed that the basis of Mining Mineral Co. stock was in excess of $1,500.00.
(4) The Canadian tax of $375.00 withheld at source should be claimed as a credit against tax.
(5) It is assumed that no depreciation or operating expenses (except repairs) deductions have been claimed in excess of 75% of the total of these items.
(6) No interest is reported on the 1940 tax refund.
(7) There is a $700.00 capital loss carry-over to 1945.

(8) Income from business is calculated as follows:

Net income, per books		$ 5,500.00
Drawings		4,500.00
Repairs—25% of $400.00		100.00
		$10,100.00
Less:		
Cost of furniture	$800.00	
Depreciation to 6/30/44	520.00	$ 280.00
Depreciation for 1944		40.00
		$ 320.00
		$ 9,780.00

BOOK REVIEWS

HERBERT E. MILLER

Contemporary Accounting. (New York: American Institute of Accountants, 1945. $10.00.)

Introduction

Contemporary Accounting is a symposium of the "views and opinions" of thirty-eight authors selected from the accounting profession. As stated in its introduction, the primary purpose of *Contemporary Accounting* is to meet a professional obligation to public accountants who have participated actively in the war, to help them reestablish themselves in the profession. Without question this objective is worthwhile, and the finished publication represents a substantial and commendable achievement.

As editor, Thomas W. Leland has written that *Contemporary Accounting* "will serve a useful purpose if it becomes the focal point for public discussion and exchange of views on fundamental principles and procedures of accounting." To some extent, perhaps it would be appropriate to describe the five reviews presented below as "discussions" or "exchanges of views" stimulated by *Contemporary Accounting*. Each review is confined to one of the five major sections into which the work is divided: Accounting Principles, Auditing Procedure, Accounting Systems and Other Subjects, Federal Taxation, and Government Relations with Business. There are several chapters within each section, each chapter being written by a specialist. This permits both the inclusion and competent treatment of a vast number of topics within the framework of a single book. As a result, the book acquires the characteristics, at least to some extent, of an encyclopedia. In some of the major sections, the subject matter is so broad and varied that no single person could be expected to undertake a review unless in fairness it was openly conceded that "uniform" appraisals should be neither attempted nor required of each topic or sub-topic. Within each review, then, it is only reasonable to expect that the several chapters or topics may be accorded varying emphasis depending upon the reviewer's background and interests.

HERBERT E. MILLER

University of Minnesota

Accounting Principles

Chapter

1. Progress in Development of Basic Concepts—Thomas H. Sanders
2. Balance Sheet—William A. Paton
3. Income Statement—Robert W. Williams
4. Surplus—Eric L. Kohler
5. Consolidated Statements—Percival F. Brundage
6. Investments and Funds—Hiram T. Scovill
7. Tangible Fixed Assets—William D. Cranstoun
8. Intangible Assets—Walter A. Staub
9. Long Term Liabilities and Capital Stock—George O. May
10. Special Items Arising Out of the War—George D. Bailey

General Comments

The section serves two purposes: to provide a review of accounting fundamentals and to bring veterans and others up-to-date on recent developments in accounting thought and practice. The second purpose is carried out in each section and the reader will have a good inventory of recent writings and rulings of government agencies.

Many chapters lean heavily on the research bulletins of the Institute and decisions and releases of the S.E.C. In some cases this seems to have been done at the sacrifice of other sources of new materials.

The copious footnotes and references found in the section make an excellent bibliography of readings in recent developments in accounting. This feature should do excellent service for veterans or busy accountants who wish to bring themselves up-to-date on accounting thought. The chapters give a good outline for an extensive reading program for such accountants. They would also serve well as an outline of readings for a university class in advanced accounting. Considering the fact that this section is a compilation of contributions of ten different authors it is surprisingly well organized and coordinated.

Progress in Development of Basic Concepts
—Thomas H. Sanders

In the first chapter Mr. Sanders gives a good summary of recent thought and writing on fundamental concepts of accounting and on accounting principles. He prefers to think of accounting as an art striving for certain objectives and believes that the term "principles" can here be used only in the sense of a "general law or rule adopted or professed as a guide to action." Departures from an established rule are therefore justified when the objectives to be attained justify such departure. Since Mr. Sanders is a joint author of a statement of accounting principles, he must accept the fact that there are principles in accounting.

The business entity concept is first treated and the question is raised whether this refers to the original entity, the present, or the consolidated system. His conclusion is that the present corporate entity is the basis.

In his discussion of the going concern he justifies in terms of this concept the setting up of reserves for deferred maintenance by charges to income where there is objective evidence of such deferral. He also concludes that valuation of inventory at cost or market, whichever is lower is in line with this concept.

In his discussion of capital and earned surplus he fails to clarify his concept of capital surplus and seems to include revaluation surplus, of which most accountants would probably not approve. He quotes with approval the Institute's conclusion that the term surplus should be abolished. The reviewer feels that this is no cure; the same difficulties would surround any term substituted for it in time. The correction must come from clarification and codifying of accounting use of the surplus account and not from changing its name.

Sanders correctly points out that the difficulty of distinguishing the two types of surplus arises largely from charges against surplus or capitalizing of surplus rather than from its origin. He criticizes the rule of the Federal Power Commission (and of the S.E.C.) that losses are to be charge first to earned surplus, and feels that a write-off of original property purchased should be against capital and not earned surplus. Premium on stock retired should be charged first against paid-in surplus, a viewpoint with which the reviewer agrees, certainly to the extent of original premium received on such stock.

In his discussion of costs and value and matching of costs and revenues, he summarizes the conclusions of Paton and Littleton. He criticizes the recent requirements of the Federal Power Commission and other commissions that cost shall be cost to the original company. Mr. May, in a later chapter, takes the same viewpoint. It seems to the reviewer that if write-ups and intangibles are ever to disappear from

the accounts, the commission is forced to require their segregation at this time. Ultimate disposition of the plant adjustments accounts has not yet been decided, however, but the separation has at least been made. (See article on this topic by E. L. Kohler in January, 1946, ACCOUNTING REVIEW.)

The chapter is particularly well suited to the needs of the veteran or accountant who has not been able to keep abreast of recent trends in the fundamentals of accounting. It has copious references to recent writings and draws to a considerable extent on Paton and Littleton's monograph *An Introduction to Corporate Accounting Standards*. Mr. Sanders' chapter is strongly recommended to those who wish an index to recent thought in this field.

Balance Sheet—William A. Paton

Mr. Paton, in the second chapter of the section, criticizes the definitions of an asset, liability, and balance sheet found in the Institute Bulletin #9, as "unduly related to the formal process of bookkeeping and lacking in substance" and prefers definitions based on more fundamental concepts. He includes prepaid expenses in current assets and concludes that any asset which is reasonably a part of working capital is to be considered current. The real test of the distinction between current and fixed assets is the use to be made of each.

The allocation of a "basket" purchase of assets to proper accounts should be according to estimated values of component elements of the purchase. He criticizes the Federal Power Commission's use of "aboriginal cost" as contrary to established accounting practices and also its elimination of excesses paid for properties of affiliated companies. It would seem to the reviewer that if any curb is to be set on write-ups and artificial "cost" figures, these are necessary steps. "Assuming a transfer on a fair commercial basis" is just what cannot be assumed under the circumstances.

New balance sheet forms giving accent to working capital position are illustrated and given some approval as more informative than conventional forms. He rejects the caption "deferred charges" and would classify such items under more appropriate asset classifications, since they are true assets.

The necessity for properly classifying reserves on the balance sheet is pointed out and the separate section for reserves is to be considered objectionable. The author does point out that war and similar reserves at present defy proper classification and may have to be stated separately. Mr. Paton's solution of the problems of treasury stock acquired and reissued is to treat the purchase as in effect a retirement and the reissue the same as an original issue. The premium on acquisition is to be charged to original premium to the extent paid in on the stock, and any excess to earned surplus.

Income Statement—Robert W. Williams

Mr. Williams, in the chapter on the income statement, deprecates the publishing of statements with no figures for cost of sales and operating expenses, but feels the practice is becoming less prevalent. He recommends that extraordinary incomes and expenses be cleared through the income account, but takes no strong stand on the question and does not note the distinct trend in this direction in corporate statements of recent years. He contrasts the historical with the earning-power concepts of the income statement and seems to feel that extraordinary items on the statement limit its use as a measure of earning-power. In contrast in the next chapter Mr. Kohler takes the viewpoint that no single statement can serve as a measure of earning-power and that no measure of earnings over a period of years

is valid unless the unusual items are considered. The single-step income statement is illustrated as representing a recent trend in corporate reporting for stockholders, but the author believes the multiple balance form conveys more information for most readers.

Surplus—Eric L. Kohler

In the chapter on surplus Mr. Kohler recommends that the legal concept of paid-in surplus be abolished from the statutes and that the whole proceeds of a stock issue be considered paid-in capital and be restricted as to dividends, a viewpoint with which Mr. May agrees in chapter ten.

A good deal of the chapter is devoted to the items *not* to be charged or credited to surplus but to be cleared through the income account. Mr. Kohler considers this the only satisfactory treatment, and believes extraordinary items occur with such frequency that no statement of income over a period of years is complete without including them in income determination. He feels that the stand in Institute Bulletin #8 in favor of this treatment has been hedged about with so many exceptions in later bulletins that it has been largely negatived except for inconsequential items which accountants have always carried through the income account. He does not favor the combined income and surplus statement.

A very complete discussion of acquisition and reissuing of treasury stock is given and the author reaches the same solution as Mr. Paton. He is of the opinion that surplus reserves serve no good purpose and that earned surplus should appear as one item with the restricted amount shown in an attached note. He does not agree that the difficulties with the term surplus will disappear if the name is changed to undivided profits or some other label, since the uncertainty has arisen because the profession has not clarified its use of the accounts and no other designation will improve the situation until charges and credits to surplus are given uniform treatment. Any new term would soon acquire the same disrepute.

Consolidated Statements—Percival F. Brundage

After a brief history of the development and tax status of consolidated statements, Mr. Brundage gives reasons why they may be illuminating and discusses the question of conditions under which they should be prepared. He leans toward the opinion that unless the ownership is at least 90%, such statements should not be used. This seems somewhat at variance with some recent writers whose viewpoint is that consolidated statements are in order whenever a group of companies is under common control and operating as a single system.

After raising the question whether inter-company profits on inventory need be eliminated where the sales are at recognized market prices, he analyzes the handling of undistributed profits of subsidiaries on the holding company books, and draws the conclusion they should appear only on the consolidated statements. He believes that the trend of accounting thought and practice is in that direction. Losses, however, which reduce the subsidiary's surplus at acquisition should be deducted from the investment.

The treatment of the statements of foreign subsidiaries, particularly in wartime, would preferably be not to consolidate. The chapter concludes with some statements illustrating consolidation and other methods of showing the assets behind the investment account. Few other recent developments are cited.

Investments and Funds—Hiram T. Scovill

Mr. Scovill discusses new developments in the handling of investments and cites a

number of interesting new cases. The clearing of losses on sales of securities through earned surplus is insisted upon and the case of the Alleghany Co. is cited as an example of inconsistent treatment of such losses. Bonds received for post-war excess profits tax refunds and treasury tax notes are considered. The opinion of the Institute Committee on Accounting Procedure that the latter may be deducted from the tax liability is summarized.

Stock dividends and their effect on the investment account are considered and the author quotes with approval the conclusion of W. L. Ashbaugh that dividends on preferred in any form are income, but stock dividends on common, no matter in what form of stock, are not income to the recipient.

Tangible Fixed Assets—William D. Cranstoun

After declaring that fixed assets are to be carried at amortized cost, Mr. Cranstoun takes the viewpoint, in chapter seven, that under certain circumstances, such as issues of bonds against undervalued property, a write-up may be in order. Also in a period of inflation he believes it might be desirable to revalue assets on the basis of the lower value of the dollar, since our measuring stick, the dollar, would then have changed. His stand on the question of revaluations is somewhat indefinite.

In discussing the replacement method of depreciation, the author should have pointed out that the Federal Power Commission and various state commissions have changed public utilities from a replacement or retirement system to accrued depreciation methods similar to those used by industrials. In his discussion of accelerated depreciation he quotes from Saliers possible rates of acceleration with the conclusion that some such rates are applicable to war conditions and are legitimate devices to record excessive wear.

In considering the amortization of war facilities he points out that facilities which will be usable for peacetime purposes should be charged against peacetime operations, and leans toward a differentiation of such amortization for income tax purposes and for operating purposes. This would result, in his opinion, in less distortion of the income statement.

Intangible Assets—Walter A. Staub

In his analysis of intangible assets in chapter eight, Mr. Staub follows the Institute Committee in dividing intangibles into Type A—those of limited life, and Type B—those of unlimited life. In classifying the excess arising from consolidation as Type B he does not mention the possibility that part of this excess may be tangible.

The payment for intangibles with stock raises the question of the value of the stock given, and the author points out correctly that par is no test of value. He does not, however, indicate how the proper value for stock would be arrived at. The capitalizing of expenses of development and research which result in real values is approved, but the suggestion is made that where regular research departments are continuously working on new developments such costs may better be treated as operating costs since they are necessary to keep abreast of competition.

The amortization of Type A intangibles is recommended, but he finds no case for amoritizing intangibles which are being maintained by current expenditures. He does not consider the writing-down of goodwill which seems to be deteriorating. The limited year purchase plan for goodwill which he recommends is an admission of the fact that purchased goodwill usually tends to disappear, as economists have always insisted. He does, however, defend the long established custom of writing

down intangibles which have no limited existence by charges to income.

Long Term Liabilities and Capital Stock—George O. May

In his discussion of bond discount in chapter nine, Mr. May seems to adhere to the view that bond discount is an asset and justifies this viewpoint by Research Bulletin #9, which defines an asset as "anything represented by a debit balance (other than a deficit) that is or would be carried forward upon a closing of the books . . . according to the rules and principles of accounting." This abstruse "definition," or one still more vague, is needed to classify discount in this way. Mr. May also imputes to the executive committee of the American Accounting Association the viewpoint that no account should be kept with bond discount. The quotation he cites from its Principles directly contradicts this assertion. The handling of discount on the debit side of the balance sheet is finally approved as a "common practice long established" which it would be inconvenient to change.

The effective interest method of amortization is rejected in favor of straightline, since this is simpler and just as effective, in the author's opinion. He is opposed to writing off the discount in its entirety to surplus. The "loss" on retiring bonds he would write off to surplus at once and objects to carrying it forward as a deferred charge. The comparison he draws with a cancelled lease is rather compelling. A "profit" on retirement would similarly be credited to surplus. Clearing through the income account might lead to misconception, in his opinion.

The long held accounting viewpoint that amounts paid for stock in excess of par or stated value should be considered capital and not called surplus is reiterated; a stand with which most accountants would heartily agree. Distributions of paid-in surplus should be carefully limited and authorized by stockholders. The author might have added "and have the consent of the bondholders," since they are adversely affected. His analysis of stock dividends is limited largely to a discussion of the amount to be transferred from earned surplus, and Research Bulletin #11 is quoted for proper treatment.

Special Items Arising Out of the War—George D. Bailey

In the last chapter of the section, Mr. Bailey develops the problems of war reserves, cost-plus-fixed-fee contracts, renegotiation, termination claims, and frozen inventories in outline, since several of these topics are treated in detail in some later chapters. The uncertainty surrounding balance sheet treatment of war reserves, the sources of such reserves, and the types of charges to be made against them are pointed out, and some illustrations are given from corporate statements. He concludes that there is little certainty of how they will be used or how to treat them at present.

A brief summary is given of the problems arising out of war contracts. Inventories which were unsalable because of war restrictions are still carried as current assets by most corporations, though frequently reserves for obsolescence have been set up against them. This seems to him acceptable treatment. The balance of the chapter consists of excerpts from Institute bulletins concerning contract problems and war reserves.

The reviewer feels after an examination of this section that the profession is evidencing a rather refreshing willingness to reexamine its fundamental concepts, principles, and procedures. It is taking inventory of its methods and indicates a willingness to accept some necessary changes. It is assuming the responsibility of a rather complete survey of its own methods and

is not content to wait for government agencies and the courts to establish rules for its work. In recent years it has endeavored to see that government agencies and Congress shall have the benefit of the enlightened opinion of those on the firing-line who give effect to these decisions. It has also anticipated controversial issues before others have ruled on them.

If this attitude of the professional accountant continues there is a good probability that there will be less conflict with the agencies of the government, such as the S.E.C., the Bureau of Internal Revenue, the Federal Power Commission, and the various war agencies. This will mean that both sides will modify their opinions and perhaps achieve a more satisfactory solution of some of the difficult problems of accounting and of financial reporting.

E. A. Heilman

University of Minnesota

Auditing Procedure

Chapter

11. Trends in Auditing and Reporting—Samuel J. Broad
12. New Auditing Techniques—Maurice E. Peloubet
13. Audit Programs and Working Papers—Maurice E. Peloubet
14. Receivables—Maurice H. Stans
15. Inventories—C. Oliver Wellington

General Comments

The content of the five papers in this section has been broadly but aptly summarized by Mr. Broad in the opening paragraph of Chapter 11 as follows: "For some years past, the accounting profession has been working in an organized way toward a clarification of its professional responsibilities. Through the activities of its various committees, the American Institute of Accountants has taken the lead in efforts to define more precisely what are generally accepted accounting principles and to obtain agreement on debatable accounting questions; to clarify the duties and responsibilities of the independent auditor, and the principles which control the scope of his examination and the content of his report and opinion; and to set standards of professional conduct."

The subject matter of the various papers overlaps to a considerable extent, particularly in the treatment of such vital matters as internal control and the extensions of auditing procedure. It would have been impossible to present each paper as a unit without some overlapping because of the detailed treatment accorded receivables and inventories, which also form an integral part in any discussion of trends, techniques, and audit programs.

The papers in this section are of particular value to those who have been out of touch with the evolutionary changes in auditing, as reflected in the published literature and correspondence of the period beginning in 1939. The summary and appraisal of these changes should permit one to understand and to evaluate the progress that has been made.

Trends in Auditing and Reporting—Samuel J. Broad

Mr. Broad's paper is outstanding. With clarity and thoroughness he traces significant trends, quoting liberally from publications and reports of the American Institute of Accountants and of the Securities and Exchange Commission. Some of these trends are summarized below. It is, however, impossible to do justice to Mr. Broad's careful, detailed, and documented presentation in this summary.

Extensions of Auditing Procedure published in October 1939, brought about a gradual change in emphasis in auditing procedures and placed increased emphasis on a review of the effectiveness of internal control. There is also a tendency to perform more of the work during the year and

the extent to which this can be done depends largely upon the adequacy of the system of internal control. New problems have arisen, some as a result of legislation, such as wage and salary stabilization.

Emphasis on the question of independence of public accountants has increased principally as a result of the passage of the Securities Exchange Act of 1934.

The term "auditing standards" as distinguished from "auditing procedures" is a comparatively recent one in accounting literature. Mr. Broad quotes from his article "Auditing Standards" in the November, 1944, issue of *The Journal of Accountancy* in which he specifies in a preliminary way twenty-six standards which he believes have been sufficiently established to have attained that rank.

The form of the accountant's report or certificate is thoroughly discussed. In *Extensions of Auditing Procedure* certain changes were recommended in the form used prior to 1939. In February, 1941, the Securities and Exchange Commission amended Rule 2-02 relative to requirements for accountants' certificates filed with the Commission. The committee on auditing procedure has recommended, and has approved, additional changes designed to clarify the certificate and to direct attention to the importance of stating qualifications or exceptions in accountants' reports.

New Auditing Techniques—Maurice E. Peloubet

Audit Programs and Working Papers—Maurice E. Peloubet

Auditing procedures have been strengthened by the adoption of the original and succeeding "Statements on Auditing Procedure." Demands for the maintenance of standards and the lack of manpower have forced accountants to do much work during the year. Leniency of government agencies in extending time for the filing of reports has been a further help in making it possible to spread the work over the year.

The growing tendency to specialize has influenced staff assignments, even in comparatively small offices. The increasing complexity of business, particularly the complexities introduced by government regulations and requirements, makes it necessary to study the special qualifications of staff members with greater care than formerly.

Internal auditing has grown in importance, and from the point of view of the public accountant this is significant, for the audit of large organizations is made possibly largely because of the work of the internal auditor and the reliance which tests show may be placed on such work. It also makes possible the performance of much interim work.

Under the heading "Clients Representations," Mr. Peloubet discusses the auditor's position as to client representations and specific representations relating to inventories, liabilities and property.

Every student of auditing is familiar with the old discussion of "canned" vs. "tailor-made" audit programs. After reviewing the history of this question, Mr. Peloubet concludes that "we are now in a period of when the necessity for minimum standards, control of staff operations, and the necessity of meeting a variety of formal demands requires the use of formal audit programs." Also, "Constant efforts are being made to encourage initiative and the exercise of independent judgment on the part of all members of the staff."

It is interesting to note the increased emphasis being placed on the inclusion of a statement of application of funds in an audit report. Mr. Peloubet hopes that this form of statement will be more frequently demanded by bankers, credit men, and other credit grantors.

The section on working papers treats such matters as indexing and filing, correspondence, report files, indexing methods, permanent file papers, and final filing. A valuable feature of this section is an extended "Example of Questionnaire For Evaluation of Internal Control." There is also a detailed "Illustrative Summary of Audit Work and Internal Check" for a corporation with a number of subsidiaries, together with illustrative working papers applicable in this type of engagement.

Inventories—C. Oliver Wellington

Every present-day discussion of inventories, as well as of accounts receivable, must, of necessity, be written in the light of *Extensions of Audit Procedure* and the following "Statements on Auditing Procedure," and with the murky shadow of the McKesson & Robbins case in the background.

Mr. Wellington's discussion in this paper "is directed to auditing procedure in connection with inventories in a period when *normal* business operations have been resumed." The underlining of the word, normal, indicates that the reviewer is puzzled as to just what normal is going to mean in the post-war world. It is not meant to detract from the excellent and detailed discussion of the subject of inventories by Mr. Wellington.

It would be extremely difficult to summarize this highly detailed paper, and it is therefore probably sufficient to state that it treats thoroughly of the subject under the following headings:

Planning in Advance of Inventory Taking
Checking Inventory Quantities and Condition
Control of Records of Quantities
Verification of Prices
Other Work on Inventory.
Reference to Inventory in Auditor's Report

Receivables—Maurice H. Stans

Mr. Stans covers adequately the development of the extensions of auditing procedures relating to receivables since early 1939. The terms "practicable" and "reasonable" used in the Institute statement are discussed. He concludes that "it is generally recognized that only the most unusual circumstances would permit an accountant to assume that he had followed accepted auditing standards when he had not undertaken the confirmation, at least by test methods, of the receivables of a company being audited."

Other phases of the topic treated include: positive vs. negative confirmation, test confirmations, confirmation replies, confirmation at other dates, reliance upon internal control, special wartime receivables, and receivables as collateral.

An appendix titled, "Verification of Notes and Accounts Receivable" adapted from *Examination of Financial Statements by Independent Public Accountants* with deletions and addendum to give effect to *Extensions of Auditing Procedure* is an appropriate addition to the paper.

HARVEY G. MEYER
University of Tennessee

Accounting Systems and Other Subjects

Chapter

16. Accounting Systems—Eric A. Camman
17. Cost Accounting—Harry E. Howell
18. Budgets and Budgetary Control—Prior Sinclair
19. The Preparation of Accountants' Reports—John H. Zebley, Jr.
20. Utility Regulation—Henry A. Horne
21. Accounting for Investment Companies—H. I. Prankard, 2nd
22. Bankruptcy Law—Charles S. Banks
23. Professional Ethics—John L. Carey

Accounting Systems—Eric A. Camman

The author has confined the scope of this chapter mainly to describing some of the more prominent developments during the war years which have affected accounting systems design, emphasis being placed upon the impact of Federal Laws and Administrative Regulations on accounting systems.

He has proceeded on the assumption that, "articles which have already been published in various periodicals on phases of these changes will be more helpful and instructive than either an abstract thereof or any new presentation that could be written for the purpose in a short time."

The first article reprinted is, "A Mechanized, Many Purpose Payroll Plan," by A. J. Fournier, which originally appeared in *The Controller*, December, 1944. The article describes in detail a method of payroll accounting embodying the use of accounting machines.

The second article reprinted is, "A Manual Payroll System for Present Day Needs," by Frank D. Burk. This appeared in *NACA Bulletin*, Vol. XXIV, No. 10, January 15, 1943. All payroll records described are kept by hand.

A third article titled, "Problems of Accounting for Materials Furnished by Prime Contractors to Fixed Price Subcontractors," by Julian A. Hawk, is reprinted from *Wartime Accounting*, 1942, pp. 67–74. This article discusses the use of flow charts, charging subcontractors on a value basis, charging subcontractors on a unit basis, methods used to control quantities, problems of handling scrap and rejections, and inventories. Examples of a flow chart and of a simplified inventory control system are appended.

The fourth, and final article reprinted is, "Unit Equipment and Depreciation Records," by Joseph J. McGuigan. This was taken from *Profit*, Vol. 12, No. 9, September, 1941. The article presents one method for the keeping of unit cost records on equipment. The illustrative forms are all standard Pathfinder forms.

The material should be of interest to readers who have problems similar to those covered.

Cost Accounting—Harry E. Howell

The author presumes that the reader has a basic knowledge of cost accounting theory and familiarity with manual and mechanical cost recording procedures. He discusses the development and trends in cost accounting over the past several years, and considers the possible effect of wartime experience on post-war cost accounting principles, procedures, methods, and the use of information derived therefrom.

In twenty-two pages, he somehow manages to discuss cost systems, control of manufacturing costs, predetermined costs, production and cost center budgeting, control of distribution costs, differential costs, the use of cost information in pricing, and cost reports.

The presentation is interesting, informative, and stimulating. The chapter should be required reading for all students majoring in accounting, at least until such future time as cost accounting text books are brought up-to-date. Many practitioners should find it of value, too.

The sections dealing with the relationships between cost procedure and price policy and practice during the war and in the post-war period provide much food for thought. There is no problem of greater import in present day business and economic life than sound pricing. The key to sound pricing in the long run certainly lies in full information on costs. Currently, a full knowledge of costs is essential to optimum operation under price control regulations.

Budgets and Budgetary Control—Prior Sinclair

To a considerable extent this chapter could be characterized as being an outline of the theory and practice of business budget planning and control. The subject is considered not as a matter of mechanical routine or as a phase of accounting procedure, but as reflecting the considered plans of practical business management. The close relation of budgeting to the accounting function is noted and is commented on throughout the article.

The author sets forth the purposes of the budget. Several different budget classifications are discussed. The limitations of the budget are made clear. Some detailed comments on budget organization and administration are made covering such points as the preparation, approval, installation and administration of the budget.

The various types of budgets used in business administration are discussed briefly. These are: Master Budget, Financial Budget, Estimated Balance Sheet, Estimated Profit and Loss Statement, Sales Budget, Production Budget, Materials Budget, Purchase Budget, Labor Budget, Manufacturing Expense Budget, Selling Expense Budget, Advertising Budget, Management Expense Budget, Plant and Equipment Budget, and the Retail Merchandise Budget.

The methods used in constructing the budgets in an actual case are discussed in several paragraphs. Here again, the procedure is outlined only. Much more information would be needed to make the illustrative case fully comprehensible.

The chapter closes with a discussion of the Profit Realization Chart and of Budget Reports.

As an introduction to the subject, this is an excellent article. A rather comprehensive view of both the theory and technic of budgeting is presented. Fortunately or unfortunately, the reader is left with the feeling that in applying the technic to a given business, he would really be up against the awfulness of reality.

The Preparation of Accountants' Reports—John H. Zebley, Jr.

Mr. Zebley's article might better be titled "The Preparation of Accountants' Reports Related to: (1) the Examination of Financial Statements, (2) Special Examinations," since those are the subjects discussed. His thoughts are mostly in terms of independent public accountants, clients, engagements and examinations. He does not consider *per se* accounting reports prepared within the business itself. Within these limits, Mr. Zebley has prepared an article of unusual merit.

He discusses: the Preliminary Planning of the Report, Responsibility for Financial Statements, Variation in Form of Reports, General Arrangement of Report on Examination of Financial Statements, Comments on Specific Items on Financial Statements, Common Faults in Report Writing, Composition of Report, and Checking and Reviewing Report.

The section dealing with Common Faults in Report Writing should be of value to all accountants. A report which meets the critical requirements set up therein, will be a good report.

Utility Regulation—Henry A. Horne

The reviewer approaches this chapter devoid of prejudice and with an open mind, since he knows almost nothing concerning either public utility regulation or accounting in the public utility field. There is some probability, therefore, that his reactions as a reader may be typical.

Mr. Horne states in his conclusion that, "This is an outline only, of the points at which the regulation of public-utility enterprises has impinged on the practice of

accountancy. Accompanying and interwoven with that outline has been placed what was hoped to be a recital of historical background sufficient to enable the reader to understand the motives behind most of the conflict that was referred to in the opening paragraphs of this chapter." The conflict referred to is about accounting questions in the field of public-utility regulations in the years 1938 to 1945.

The accounting phase which has to do with the amounts at which the utility companies investment in operating plant and equipment should be recorded in their accounts is traced from "Smyth versus Ames" in 1890 through the "Arkansas Light and Power Company" and the "Montana Power Company" cases in 1944. The phase of accounting dealing with the treatment of provisions for depreciation is traced from the writing of Lawrence R. Dicksee, FCA, in 1892 to the discussion of the NARUC Committee report of 1944 by George O. May in the *Journal of Accountancy*, January 1945.

The reader cannot escape concluding that:

1. The conflicts mentioned have not yet been reconciled.

2. Accounting principles and terminology as set forth in public utility law and regulations mean precisely what the justices or commissioners intend them to mean at the time they set them forth. Whether or not these conform to what accountants consider sound and generally accepted, actually has had only little to do with the matter to date.

Accounting for Investment Companies—H. I. Prankard, 2nd

The subject matter of this chapter in all probability will not be of great interest to many readers, because of its special nature. In the main, it is a technical discussion of the accounting problems and audit procedures peculiar to closed-end and open-end management investment companies.

The author introduces the subject by setting forth a broad classification of investment companies and by giving a brief history of investment companies before and after 1929.

The general accounting requirements of management investment companies are considered in detail. The principal developments prior to Januray 1, 1940, and developments since that date are discussed at some length. The rulings of the Securities and Exchange Commission promulgated to the end of 1944, which are of particular interest to accountants, are set forth with brief descriptions.

The author delineates his understanding of the generally accepted accounting principles as at April 1, 1945. The treatment of interest received on defaulted and contingent interest bonds is considered in detail. The author disagrees with the chief accountant of the Securities and Exchange Commission as to the proper method of accounting for such interest. He gives his reasons for disagreeing, citing an interesting experience of one investment company in support of his viewpoint.

The Federal Income Taxation of Regulated Investment Companies under Supplement Q of the Internal Revenue Code is summarized and analyzed.

An outline of auditing procedures for examinations of financial statements of management investment companies is suggested. A detailed program for the audit of a company's investments is presented as a part of the outline.

Finally, the financial statements of closed-end and open-end management companies, unit investment trusts, and periodic payment plan trusts are considered.

The author expects that there will be many changes in the future in the accounting principles and practices applicable to investment companies.

Bankruptcy Law,—Charles S. Banks

Mr. Banks has presented in this chapter much of the information which an accountant should have of bankruptcy legislation and its administration in the district courts of the United States. The legislation discussed is the United States Bankruptcy Act, commonly referred to as the "Chandler Act," which was passed by the 75th Congress, and which became effective on September 22, 1938.

The following principal subjects are discussed in detail: Bankrupts, Corporate Reorganizations, Arrangements, and Real Property Arrangements by Persons Other Than Corporations.

The chapter should be especially valuable to individuals who plan to take the Certified Public Accountants Examination. Answers to many of the questions on bankruptcy included in recent American Institute of Accountants Law Examinations are to be found therein.

Professional Ethics—John L. Carey

This chapter is in the main a restatement of the rules of professional conduct of the American Institute of Accountants. Mr. Carey sets forth all the rules in numerical sequence and adds whatever comment seems necessary after each one. The reviewer finds that he has little to say beyond the remark that, "This is it." A more literate review perhaps would say, "These are they."

In the final analysis, the ethics of a profession evolve. Most of the rules of conduct of the American Institute of Accountants have developed over the past forty years. There are only sixteen of them. To quote Mr. Carey, "They are intended to safeguard the individual practitioner against pitfalls of which he might otherwise be unaware; to reassure the public that it may repose its confidence in the profession and that its interests will be protected; to preserve friendly relations among practitioners and minimize internal friction so that the profession may be united."

Harold B. Eversole
State University of Iowa

Federal Taxation

Chapter

24. Major Legislative Changes and Judicial Decisions Since 1939—Maurice Austin
25. Changes in Determination of Taxable Gross Income—Charles Melvoin
26. Changes in Deductions and Credits—Henry B. Fernald
27. Changes in Taxation of Corporations—Mark E. Richardson
28. Changes in Tax Procedures and Practice—J. K. Lasser
29. Income Taxation of Trusts and Estates—Marquis G. Eaton
30. Gift and Estate Taxes—Walter A. Hurley

General Comments:

Starting, for the most part, with the Internal Revenue Code which constituted a codification and consolidation of all existing internal revenue laws at January 2, 1939, the principal changes in the field of Federal income, estate, and gift taxation, occurring up to early in 1945, are summarized and briefly discussed in this section.

The galloping pace of changes and developments in Federal income taxation has been such that those who have been away from this sort of work for some length of time may find the subject matter much more than a "Refresher Course." Some parts will comprise an almost new field of study. Even one who has lived through and with the events and changes which are summarized, cannot deny a feeling of fresh surprise and consternation in looking back

at what has occurred. The shifts, changes and alterations indeed have been so numerous and substantial that the practitioner and the accountant who has not completely lost contact, as well as one who must reestablish himself, will find the summarization very helpful.

The reviews and discussions are rich with practical explanations. Subject matter which might be expected to be as dry as dust takes on new life when the reasons for certain changes, the apparent legislative intent, the practical results, and remaining uncertainties are pointed out. In a few places in the section, the language used shows the unfortunate influence of the intricate and devious mode of expression contained in the Code and Regulations. In the main, however, this insidious influence has been resisted. By their performance, the authors demonstrate the practicability of the use of simple English and direct statement in the field of Federal taxation. It is refreshing to find that double and triple negatives, unstated inferences, parenthetical expressions and references, and other confusing "hocus-pocus" verbiage (which seem to have become part and parcel of the Code and Regulations and some Decisions) are not inherently necessary.

The pace of the changes is inevitably emphasized by the developments which have taken place since the sections were written. Only brief reference is made to the Tax Adjustment Act of 1945. The Revenue Act of 1945 was as yet unborn at that time. In the six months since the editor completed his introduction, the Supreme Court of the United States has spoken on a number of issues (family partnerships, for instance) in a way to change some of the concepts which were entertained when the section was written. This dating of the material does not detract from its value, but points, however, to an opportunity for the maintenance of very valuable data through periodic revision.

The objective of this section is stated by Mr. Maurice Austin as follows:

"By their very nature, therefore, these chapters are not and do not purport to be a complete course on the subject, but, rather, are intended to constitute a connecting link, to bridge the gap which the war period has created for those previously experienced in taxes who have lost contact therewith by reason of their part in the war effort. It is perhaps unnecessary to add that these chapters are not intended to replace, but rather to supplement, statutes, regulations, complete courses, texts, services, tax periodicals, and other similar materials."

The first six chapters are devoted to changes in income taxation, appropriately organized as indicated by the chapter titles. The material, presented by six different authors, is remarkably well coordinated. There is relatively little unnecessary repetition.

Major Legislative Changes and Judicial Decisions Since 1939—Maurice Austin

The tempo and informative style that is characteristic of this section is first apparent on page 10 of the first chapter. At that point Mr. Austin begins his very capable summarization of a few of the outstanding decisions of the United States Supreme Court under the heading, "Major Judicial Decisions." The first ten pages (except page 1) contain a listing of most of the changes enacted by the consecutive Revenue Acts from 1939 to 1945. Although necessary, the listing produces an unfortunate beginning. The reader is deluged by torrents of unrelated facts which are difficult to understand and virtually impossible to remember. These pages create much of the same feeling of frustration and discouragement which may be encountered by anyone beginning or going back to a study of income tax matters. If the prospective reader can steel himself to endure

this initiation (or scan the data as a source for future reference), his fortitude will be rewarded by the presentation from page 10 on. The chapter concludes with a brief discussion of "Tax Accounting versus Generally Accepted Accounting Principles."

Changes in Determination of Taxable Gross Income—Charles Melvoin

Charles Melvoin's chapter on "Changes in Determination of Taxable Gross Income, Including Capital Gains and Losses" discusses seventeen instances and situations in which extensive changes, both statutory and otherwise, have occurred, in addition to the changes in Capital Gains and Losses. In his introduction, he states:

> "Many of these changes involve the introduction of new concepts in respect of what constitutes gross income, and serve further to direct attention to the apparently irreconcilable differences and disparities between accounting and tax determination of income.
> Of necessity, the choice of materials to be emphasized has had to be limited, and so instances and situations, other than those specifically covered herein, have either had to be completely omitted or otherwise cursorily dealt with . . . "

Each of the topics is introduced by "general statement" which briefly, but effectively, outlines background information. The discussion then proceeds, through reference to specific decisions, rulings, sections of the law, etc., in description of the nature of the changes which are deemed pertinent.

Changes in Deductions and Credits—Henry B. Fernald

This chapter gives consideration to (a) deductions of Section 23 to be made from gross income to arrive at the net income specified in Section 21, (b) the credits applicable against such net income in the computation of tax, and (c) the credits which are permitted in determining the amount of tax which is payable.

The comparison is made only between the Code as originally enacted and the law as it existed at March 31, 1945, without attempting to trace all the progressive and variant changes that were effective for one year or another of this period. The subject matter carries out the author's intention:

> "to state the general nature of the changes without attempting to state all their many specifications, technicalities, and limitations, for which reference should be made to the law or regulations or textbooks and services which have been issued."

Approximately one-third of the chapter is devoted to a rather detailed discussion of the treatment of war losses.

Changes in Taxation of Corporations—Mark E. Richardson

In his chapter, Mark E. Richardson undertakes the tremendous task of describing in some detail, but in a limited space, the excess profits tax on corporations. The author's discretion in choosing the balance between broad outline and specific description is admirable. He states:

> "this review can serve only as a guide and the actual application of any statutory provision in any particular circumstance can be determined only after study of the pertinent statute or regulations."

The "guide" which he has produced correlates the provisions relative to excess profits tax (and the many changes therein) in a very helpful manner. In addition, "Regular Corporation Rates," "Consolidated Returns" and "Surtax in Corporations Improperly Accumulating Surplus" are outlined and discussed briefly.

Changes in Tax Procedures and Practice—J. K. Lasser

For his discussion of "Changes in Tax Procedures and Practice," J. K. Lasser has selected ten topics relative to the method of making tax returns and the mechanics

of assessment or collection as it concerns the corporation and individual taxpayer. He also reports on "Changes in the Tax Court organization and work" and the "Result of the Dobson case in tax appeals." In addition, Mr. Lasser summarizes the change in the activities of the Bureau of Internal Revenue, which he refers to as "...an emphatic change for the better in several points on which accountants had many complaints before the war."

The three topics relative to individual returns and procedures require almost half of the chapter. Emphasis is also given to rules for preparing returns after renegotiation and termination, as well as to the considerable difficulty which still exists as a result of the difference between the accounting and the tax concepts of income.

The presentation is in line with Mr. Lasser's usual clarity. There is a philosophical note in his comment:

"Thus the decisions pile up, as do the texts and the commentaries. There is a monumental task for those who would research even the simplest tax note. However, the complications and continuing massing of precedent are not without their compensations and pleasures for the breed of quaint people who live in work of this sort."

Income Taxation of Trusts and Estates—Marquis G. Eaton

The flow of important changes is further reflected in the chapter by Marquis G. Eaton, which covers the subjects treated in the trust supplement of the Code. As stated by Mr. Eaton:

"the changes have been so far-reaching as to represent in some particulars an about-face in the basic theory upon which estates and trusts are taxed. Under such circumstances it would be difficult, and perhaps futile, to discuss the changes of the period without recognition of the structure upon which they were imposed.

"It will be the aim of this chapter, then, to discuss the trust supplement in its entirety, but with more detailed treatment of the new provisions than of the old. Where material statutory changes have been made in the 1940–1944 period mention will be made of that fact. The arrangement follows the order of the sections in the Code."

The author refers repeatedly to the specific phraseology of the Code and Committee Reports by quotation of pertinent provisions. His discussion proceeds to high-light, distinguish, and explain the meaning and limitations reflected in such phraseology. The result is a highly informative coverage of the subject.

Gift and Estate Taxes—Walter A. Hurley

The final chapter is the only one in the section not concerned with income taxation. It is also the only chapter which is not burdened with the necessity of reporting and explaining numerous substantial changes. The presentation includes filled-in specimen returns, tables of tax rates, and tables of present worth, in addition to specific discussions of principles and procedures.

In summary, it is recognized that a monumental task has been approached with courage and intelligence. The task has been capably executed. The section is recommended for reading and study by private accountants and executives, as well as by public accountants, as a valuable source of background and explanatory information. The presentation is sufficiently detailed and specific to merit the attention of experienced tax practitioners.

T. K. Riddiford

Minneapolis

Government Relations with Business

Chapter

31. War Contracts—Carman G. Blough
32. Wage and Salary Stabilization—David C. Anchin
33. Fair Labor Standards Act—Raymond G. Ankers
34. Priorities and Allocations—Albin D. Strandberg

35. Price Administration—Paul M. Green
36. Surplus War Property—Joseph B. Baerncopf
37. Financing of War Production Contracts and War Plant Facilities—Milo B. Hopkins
38. Requirements of the Securities and Exchange Commission—William W. Werntz and Edmund B. Rickard

General Comments

The eight chapters in this section cover a wide range of topics. Six of the chapters cover accounting aspects of wartime controls; while chapters 33 and 38 cover two fields of governmental relations with business which began well before the war and which have more permanent status. Since the wartime controls, whether abandoned or still in effect, will continue to present many problems to the practicing accountant for some time to come, all of these chapters should be of more than historical interest to the profession. While the chapters are quite uneven in the extent of coverage of the various topics, they all give a valuable starting point to the reader who wishes to brush-up on the events of the war period, and all include excellent bibliographies to guide further study.

War Contracts—Carman G. Blough

This chapter begins with a discussion of the legal and administrative background of government procurement and of the procurement organization within the War and Navy departments and other agencies. There follows a discussion of the problems of contract pricing under war conditions and an analysis of fixed price contracts, cost-plus-fee contracts and incentive contracts. T.D. 5,000 of August 1940, jointly approved by the Treasury, War and Navy departments, and the manual entitled "Explanation of Principles for Determining Costs under Government Contracts," issued by the War and Navy departments in April 1942, are referred to in this connection but no discussion or analysis is made of the provisions of these statements of the government's position with respect to allowable costs.

Procedures and problems of repricing contracts are next discussed and the growth of renegotiation is traced through the period covered by the 1943 Act (to December 31, 1945). Since the act provides that proceedings may be begun up to one year after the close of the fiscal year or after the date of filing a mandatory statement (which may be as much as four months after the close of the fiscal year), whichever is later, and one more year is allowed to reach an agreement or to issue an order by the Board, the accountants are likely to find renegotiation problems arising for at least two years to come. The Act defines "excessive profits" in very general terms and the determination of excessive profits on particular contracts and on the overall war business of particular contractors is left almost wholly to the judgment of the negotiators. Settlement by agreement is depended on whenever possible, although in general the boards have followed the policy of not haggling once their position on any given situation is determined. The effects of recapture of excessive profits on income tax liabilities and payments have been clarified on a reasonable and simple basis by the Bureau of Internal Revenue in a statement of policy (IT 3577) which was later adopted, by amendment to the Renegotiation Act into the law.

The chapter closes with a discussion of contract termination problems, procedures and principles of settlement. The adoption of a uniform termination article for fixed-price contracts and the setting up of the Office of Contract Settlement within the Office of War Mobilization and Reconver-

sion in October, 1944, have avoided many of the difficulties met in settling contracts in World War I. Centralization and standardization of procedures and principles and the use of advisory committees on special aspects of the problems of termination have led to reasonably direct and prompt methods and procedures for the termination of contracts, plant clearance, interim financing and final settlement. Regulations and memoranda have given reasonable latitude to the contractors' systems of record-keeping and statements. While the flood of contract terminations that came with V-J Day has put heavy pressures on the structure described in this section, it appears that the hope of "sound accomplishment" expressed by Mr. Blough is in process of fulfillment.

Wage and Salary Stabilization—David C. Anchin

This chapter contains an extremely compact but comprehensive summary of the growth and development of the administration of the Stabilization Act of 1942. Mr. Anchin points out the responsibilities of the accountant in seeing that proper records are kept, that liabilities arising under the Act are discovered and disclosed, and that clients are properly advised and represented in disputes or proceedings.

The jurisdiction of the various agencies of government over wage stabilization is outlined and the determination of the effective date of the law and the classification of employees and the establishment of the controlling regulations applying to each group and classification are discussed, followed by a brief summary of the government's audit procedure for discovering violations.

The next (and main) section of this chapter discusses at some length the main problems arising and the rules and procedures adopted by the administering agencies to carry out the purposes of the Act, including an outline of the minimum requirements for record-keeping.

In the last section, Mr. Anchin returns to the problem of the accountant and indicates the auditing steps necessary to perform his function and concludes with a brief statement of the common violations which should be guarded against.

The Fair Labor Standards Act—Raymond G. Ankers

Mr. Ankers outlines, in this brief chapter, the purposes and main provisions of this Act. He discusses the coverage and overtime pay provisions of the act, and the working of the "time-off" and "prepayment" plans of wage payments. Next he presents a summary of the required records and a discussion of the child labor provisions of the act. He discusses the impact of the act upon accounting firms with respect to their own employees and concludes with a brief reference to the auditor's responsibilities concerning prevention and detection of violations during the conduct of an audit.

Priorities and Allocations—Albin D. Strandberg

This chapter outlines the beginnings of priority controls under the Production Requirements Plan and its transformation into the Controlled Materials Plan that became the basic control used by the W. P. B. in directing and expediting war and necessary civilian production. The bulk of the chapter is taken up with a description of the major aspects of the plan, and the kind and form of records required or necessary. With the ending of the war the plan became history, in large part, but current discussion indicates at least a chance of its revival in some fields.

Price Administration—Paul M. Green

Mr. Green presents a summary of the policies and principles of O.P.A. in its war-

time administration of price control, pointing out the standards for prices and for determination of allowable adjustments, and the necessity for acquiring much accounting and other data from firms and industries in order to administer the law. The basic reporting form used by the agency is reprinted at the end of the chapter. A most welcome addition to this chapter would have been a section on price control during reconversion and after, and some discussion of the accounting problems arising out of petitions for price adjustment and the pricing of "new" goods.

Surplus War Property—Joseph B. Baerncopf

This very brief chapter is a summary of the provisions of the Surplus Property Act of 1944 and of the controlling sections of the War Mobilization and Reconversion Act of 1944, which set up the OWMR, which in turn gives general direction to the Surplus Property Board. The impact on accountants, beyond a need for a general knowledge of the provisions of the Acts, will come mainly in their work with the armed forces and other agencies of the government.

Financing of War Production Contracts and War Plant Facilities—Milo B. Hopkins

This chapter presents a discussion of the various methods used by the government to expand rapidly the industrial capacity of industry for the production of the eventual flood of war goods which overwhelmed our enemies. Mr. Hopkins outlines the use of advance and partial payments to contractors, the activities of the Smaller War Plants Corporation, the use of V,VT, and T credits, and the financing procedures of the RFC, and of its subsidiary, the Defense Plant Corporation. He concludes with a discussion of the provisions of the Emergency Plant Facilities Contracts. While specific accounting problems and impacts are not discussed, a reading of this chapter will indicate many considerations that will plague the accountant for some time to come.

Requirements of the Securities and Exchange Commission—William W. Werntz and Edmund B. Rickard

The accounting requirements developed and enforced by the S.E.C. in administering the laws concerning securities and security exchanges have been of the greatest importance in determining the growth and development of accounting principles and practices. The discussion of the Commission's activities in accounting matters covers the period 1940–1945 and begins with a discussion of the development of accounting principles. The Associated Gas and Electric Case (1942) is used to open the discussion of consistency and asset valuation, and other cases cited to illustrate various faulty or inconsistent practices the Commission has had to contend with. The recognition, valuation, and amortization of goodwill and other intangibles is next discussed, followed by a discussion of problems connected with the valuation of property acquired for stock, premiums on preferred stock retired, and quasi-reorganizations. Concerning this last item, the Commission in 1941 took a position with respect to certain minimum requirements which must be met before such a quasi-reorganization is considered to have been effected, and set forth certain general rules to be observed, but many specific accounting problems arising out of such reorganizations had to be handled as individual cases and the inadequacies of current principles and practices concerning, for example, net write-ups in such situations, were demonstrated. The next sections cover various problems arising out of war contracts, post-war reserves and contract termination, followed by sections concerned with the form of the income

statement, accounting for income taxes, defaulted interest, and disclosure by footnotes to the statements. The next two main sections cover auditing principles and practice and standards of professional conduct, particularly the independence of the auditor. The chapter closes with a brief summary of the commission's activities in certain specialized fields: public utility holding companies, investment companies, and security brokers and dealers.

This closing chapter of this section and of the whole volume should be compared with Chapter I for, in a sense, much of the discussion in that first chapter arose from the consideration of situations brought to the attention of accountants by the S.E.C. and the position taken by the S.E.C. on many of the accounting problems had to be taken in the absence of clear and well established principles developed by the accounting profession. Various questions on which the S.E.C. is apparently still waiting for some such agreement and recognition of controlling principles are still open, but it behooves the profession to go much further along such lines, or more rules and regulations will be established by default. Such "rules" as are illustrated by this one from Chapter I do not seem to this reviewer to be the answer to such a need, "My own preference would be, . . . for a rule which would exclude gains and losses from income accounts except where they could be shown or fairly be presumed to result from causes the effects of which it is generally regarded as desirable to reflect in concepts of income." (Ch. I, p. 13)

F. M. Boddy

University of Minnesota

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